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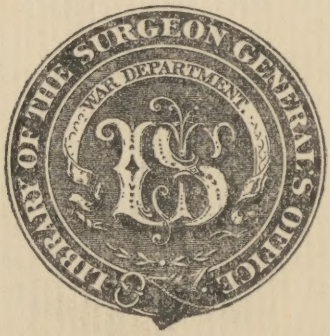
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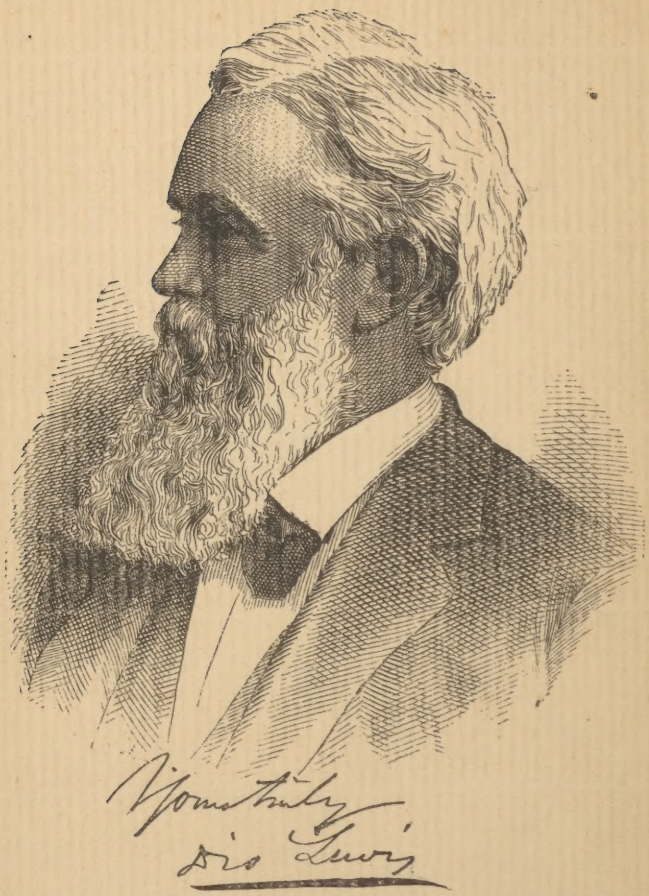
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THE

NEW GYMNASTICS

FOR

MEN, WOMEN, AND CHILDREN.

BY

DIO LEWIS, A.M., M.D.,

AUTHOR OF "OUR GIRLS," "WEAK LUNGS, AND HOW TO MAKE THEM STRONG," "OUR DIGESTION; OR, MY JOLLY FRIEND'S SECRET," "GYPSIES; OR, WHY WE WENT GYPSYING IN THE SIERRAS," "IN A NUT-SHELL," "CHASTITY; OR OUR SECRET SINS," ETC.

"By no other way can men approach nearer to the gods, than by conferring health on men."—CICERO.

NINETEENTH EDITION,

REVISED, AND GREATLY ENLARGED.

NEW YORK:

CLARKE BROTHERS,

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1883.

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I Dedicate This Work

TO THE

GRADUATES OF THE NORMAL INSTITUTE
FOR PHYSICAL EDUCATION,

WITH THE HOPE THAT IT MAY ADD SOMETHING TO THE INSTRUCTION WHICH I HAVE HAD THE GREAT PLEASURE AND HONOR TO GIVE THEM IN PERSON.

DEAR FRIENDS, OUR PROFESSION IS A MOST USEFUL ONE, AND WILL FIGURE PROMINENTLY AMONG THE AGENCIES WHICH SHALL DEVELOP THE NOBLE MANHOOD AND WOMANHOOD OF THE FUTURE.

PREFACE

TO THE TENTH EDITION.

In sending forth the tenth edition of the New Gymnastics, the author cannot refrain from expressing his gratification at the wide welcome accorded to the system of physical culture which it describes. Five years ago, at a moment full of national peril, this book was presented to the notice of the American people. That it met at such a time an instant and extended sale, may surely be accepted as evidence of a great want, and of the eagerness of the people to welcome any effort to supply that want.

More than one edition of the New Gymnastics have been published in London, England, and from that great centre the book and the system have gone to all parts of Great Britain, to Australia, South Africa, India, and to other British Colonies, — in short, wherever the English language is spoken, this treatise has made its way, and is influencing the educational systems and the personal habits of the great Anglo-Saxon race. This does more than satisfy an author's pride, it brings joy and gratitude to his heart.

This is called a new edition; it perhaps deserves to be called a new book. More than half of the treatise as hitherto published consisted of translations from the German of Kloss and Schreber. These translations are no longer included; their places have been supplied by original exercises, now for the first time published. At the same time, changes have been made in that portion of the book which was devoted to an illustration of the author's system of Gymnastics. In the constant practice of the system for the past five years, among thousands of pupils, a multitude of new exercises have been added, and the entire method has been improved in many respects. This edition is an attempt to reflect upon the pages of a book the changes which have taken place in actual practice.

I invite the attention of the intelligent reader, who would enjoy a lucid and complete discussion of the philosophy of the New System, to the admirable lecture of Moses Coit Tyler, found upon the last pages of this volume.

PREFACE

TO THE FIRST EDITION.

This book describes and illustrates a new system of physical training. Like air and food, it is adapted to both sexes, and to persons of all ages.

The new system has been introduced into female seminaries with complete satisfaction. Its beautiful games, graceful attitudes, and striking tableaux possess a peculiar fascination for girls. Public classes, composed of adults of both sexes, elicit general enthusiasm. Very young children are warmly interested, and improved in form and strength.

The exercises are arranged to music, and when performed by a class, are found to possess a charm superior to that of dancing and other social amusements, while the interest increases with the skill of the performers.

This system of exercises will correct drooping or distorted shoulders, malposition of the head, and many other common defects.

Its author has been engaged many years in teaching gymnastics. He began with a few simple exer-

cises, and, making additions from time to time, has at length developed a comprehensive system. Not one exercise is presented which has not been proved by long and varied use, while hundreds have been devised and rejected. Although the author has enjoyed during more than twenty years the discipline of the medical profession, its suggestions have not been adopted unless fully justified by experience in the gymnasium.

Efforts are being made to disseminate a practical knowledge of the new system. A college has been incorporated, — the BOSTON NORMAL INSTITUTE FOR PHYSICAL EDUCATION, — from which persons of either sex, after a full training, are graduated, with the honors of a legal diploma.

It is the ardent hope of the author that his labors may contribute something to the beauty and vigor of his countrymen.

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THE NEW GYMNASTICS.

PHYSICAL EDUCATION.

I HAVE nothing to say of the importance of Physical Education. He who does not see in the imperfect growth, pale faces, distorted forms and painful nervousness of the American People, enough to justify any and all efforts to elevate our physical tone, would not be awakened by words. Presuming that all who read this work are fully cognizant of the imperative need which calls it forth, I shall enter at once upon my task.

My object is to present a new system of Gymnastics. Novel in philosophy, and practical details, its distinguishing peculiarity is its complete adaptation, alike to the strongest man, the feeblest woman, and the frailest child. The athlete finds abundant opportunities for the greatest exertions, while the delicate child is never injured.

Dispensing with the cumbrous apparatus of the ordinary gymnasium, its implements are few and extremely simple, but are admirably calculated not only to impart strength of muscle, but to give flexibleness, agility and grace.

None of the apparatus is fixed. Each piece is held in the hand, so that any hall or other room may be used for the exercises.

INTEREST IN PHYSICAL EDUCATION.

The true educator sees in the present public interest in physical education a hope and a promise, and now he is only solicitous that the great movement, so auspiciously inaugurated, may not degenerate into some unprofitable specialty.

One man strikes a blow equal to five hundred pounds ; another lifts a ton ; another bends his back so that his head rests upon his heels ; another walks a rope over the great cataract ; another runs eleven miles in an hour ; another turns sixty somersets without resting.

We are greatly delighted with all these, — pay our money to see them perform : but, as neither one of these could do what either of the others does, so we all know that such feats, even if they were at all desirable, are not possible with one in a thousand. The question is not, What shall be done for these few extraordinary persons ? Each has instinctively sought and found his natural specialty. But the question is, What shall be done for the millions of children, women and men, who are dying for want of physical train-

ing? My attempt to answer this momentous question will be found in this work.

DO CHILDREN REQUIRE SPECIAL GYMNASTIC TRAINING?

An eminent writer has recently declared his conviction, that boys need no studied muscle culture. "Give them," he says, "the unrestrained use of the grove, the field, the yard, the street, with the various sorts of apparatus for boys' games and sports, and they can well dispense with the scientific gymnasium."

This is a misapprehension.

DEVELOPMENT OF THE MIND REQUIRES SPECIAL TRAINING.

In the midst of conversations, newspapers, and lectures, which evoke intense mental activity, we turn aside for the methodical training of the academy. The poorest man in the State demands for his children the organized school. He is right. An education left to chance could not result in that symmetry which is the highest form of all true development.

No man doubts that chess and the newspaper induce growth; but growth, without qualification, is not our purpose. We require that the growth shall

be of a peculiar kind, — symmetrical. But there is no need of argument on this point. In regard to mental training, there is no difference of opinion. Discriminating, systematic, scientific culture, is our demand.

THE BODY IS EQUALLY DEPENDENT UPON SPECIAL METHODS.

Is not the argument applicable to the body? Is the body one single organ, which, if exercised, is sure to grow in the right way? On the contrary, is it not an exceedingly complicated machine, the symmetrical development of which requires discriminating, studied management? With the thoughtful mind, argument and illustration are scarcely necessary; but I may perhaps be excused by the intelligent reader for one simple illustration. A boy has stooping shoulders, displacing the organs of the chest and abdomen. Give him the freedom of the yard and street, — give him marbles, a ball, the skates! Does any one suppose he will become straight? Must he not, for this and other defects, have special, scientific training?

Before our system of education can claim an approach to perfection, we must have attached to each school a Professor, who thoroughly comprehends the wants of the body, and knows the means by which it may be made symmetrical, flexible, and vigorous.

MILITARY DRILLS.

Since we have, unhappily, become a military people, the soldier's special training has been much considered as a means of general physical culture. Numberless schools, public and private, have already introduced the drill, and make it a part of each day's exercises.

But this mode of exercise can never furnish the muscle culture which we Americans so much need. Nearly all our exercise is of the lower half of the body, — we walk, we run up and down stairs, and thus cultivate hips and legs, which, as compared with the upper half of the body, are muscular. But our arms, shoulders, and chests are ill-formed and weak. Whatever artificial muscular training is employed, should be directed toward the upper half of the body.

Need I say that the military drill fails to bring into varied and vigorous play the chest and shoulders? Indeed, in almost the entire drill, are not these parts held immovably in one constrained position? In all but the cultivation of uprightness the military drill is singularly deficient in the requisites of a system of muscle training, adapted to a weak-chested people.

Dancing, to say nothing of its mischievous concomitants, brings into play chiefly that part of the body already in comparative vigor.

Horse-back exercise is admirable, but may it not be much indulged, while the chest and shoulders are left drooping and weak ?

Skating is graceful and exhilarating, but to say nothing of the injury which not unfrequently attends the sudden change from the stagnant heat of our furnaced dwellings to the bleak winds of the icy lake, is it not true that the chest muscles are so little moved, that the finest skating may be done with the arms folded ?

I make these suggestions, and now take the liberty to request your careful examination of the "Ring" and other exercises which appear in this work.

A WORD OF THE HISTORY OF THE NEW GYMNASTICS.

EDUCATED to the medical profession, I was constantly and painfully impressed, during several years of professional experience, with the feeble vitality of the thousands with whom I came in contact.

At length I was filled with the desire to contribute something to the physical improvement of my fellows. A Health Journal was established in a western city, and published several years. Accident led to a lecture, which was followed by eight years of life on the platform.

During the eight years of lecturing, the spare

hours were devoted to the invention of a new system of gymnastics.

The old, or German gymnasium, the one so common throughout our country, was obviously not adapted to the classes most needing artificial training. Athletic young men, who alone succeeded in the feats of that gymnasium, were already provided for. Boat clubs, ball clubs, and other sports furnished them in considerable part with the means of muscular training. But old men, fat men, feeble men, young boys, and females of all ages, — the classes most needing physical training, — were not drawn to the old-fashioned gymnasium. The few attempts that had been made to introduce these classes to that institution had uniformly and signally failed. The system itself was wrong.

ADVANTAGES OF THE NEW SYSTEM.

The advantages of the New System of physical culture are, in part, the following: —

1st. The varied movements of the New System give opportunity for the full play of every muscle in the body, resulting in an all-sided development.

2d. The exercises are constantly changed from one set of muscles to another, thus obviating weariness and undue disturbance of the circulation.

3d. The centrifugal impulse of the predominating series secures a completeness and *grace* attained by no other means, while the centripetal character of the old or German method has long been the opprobrium of physical culture, with the philosophical.

4th. In the New System the exercises are subordinated to personal or individual wants, while in the old, the person is entirely subordinated to the performance of difficult feats.

5th. The physiological purpose of all muscle training is to perfect the intermarriage between nerve and muscle. The skill exacted by the accurate lines, changing attitudes, and difficult combinations of the new methods, compels the most complete interaction between soul and body.

6th. The New School employs apparatus which cannot strain and stiffen the muscles, not even in the extremely old and young or feeble, while the old school sanctions weights which must produce the slow, inelastic muscles of the cart-horse.

7th. The New Gymnasium invites to its free and social life persons of both sexes and of all ages, while every attempt that has been made to introduce the old, or the very young, or women, to the Old Gymnasium has failed.

8th. In the New Gymnasium persons of both sexes unite in all the exercises with great social enjoyment, thus adding indefinitely to the attractions

of the place, while the attractions of the Old Gymnasium are about equal to those of a ball-room from which ladies are excluded.

9th. In the New Gymnasium everything is set to music. Marches, free movements, dumb-bells, wands, rings, mutual-help exercises. No apathy can resist the delightful stimulus. The one hundred persons on the floor join in the evolutions inspired by one common impulse. Under the old system each individual works by himself, deprived of the sympathy and energy evoked by music and the associated movement.

ORIGIN OF THE NEW SYSTEM OF GYMNASTICS.

As I have never undertaken to vindicate, in full, my own claims to originality in the field of physical culture, I deem it only just to myself as well as to others to distinctly state, in this new edition of the gymnastic guide, what portions of the New System were of my own creation.

1st. The *idea* of exercise with the rings, the *ring* itself, and every one of the more than forty exercises with this piece of apparatus, were my invention.

2d. The substitution of the wooden for the iron dumb-bell, and all the movements in the New System of dumb-bell exercises, save four, were also my invention.

3d. The *bean-bag itself*, and eighteen of the twenty-one exercises with it, were devised by myself.

4th. Of the more than sixty exercises with the wand, all, with four or five exceptions, were the result of my own experiments.

5th. Of the present system of free gymnastics, I devised about half.

6th. The *idea* of the "Mutual-Help Exercises" I obtained from a German writer; but the system employed in the New School is my own.

7th. Of the marches and skippings practised in the New School, the larger part were invented by me, but some of the best were devised by my assistants, who have served as teachers in our Training School.

8th. The sixteen exercises with clubs employed in the New Gymnasium, were mostly my own.

9th. The adaptation of gymnastic exercises to music, although perhaps not quite new, is, in the modes we have adopted, entirely new.

OTHER TEACHERS OF GYMNASTICS.

Of the more than two hundred and fifty ladies and gentlemen who have graduated from our Training School, nearly all have proved heartily loyal to my leadership. Three or four have rearranged the exercises, and thereupon preferred claims to originality.

Several works have been published containing the principal features of the New System, with unreserved recognition of my claims. A single work, published in New York, appropriated, without even a mention of my name, all the principal features and much of the detail of the system to which I have devoted so many years.

I have not said this much of my personal claims in the spirit of vanity, but because I think it simply right, that in a great movement which, within a quarter of a century, is to enter as an integral part of all school culture, the origin of the essential parts of the system should be known.

ORDER IN WHICH THE EXERCISES WERE DEVELOPED.

CLUBS.

The club was first employed. Wherever a course of lectures was delivered, the teachers and others were called together, instructed, and trained.

RUBBER BALLS.

Large rubber balls were soon introduced. The exercises with these were admirable, but the windows were broken and they were difficult to catch. Soon it was observed, if the balls were but partially inflated, for many of the exercises, they were much improved. This suggested the bags. At first they

were made very large and filled with *corn*. Then *wheat* was thought to be an improvement.

BEAN-BAGS.

In a town where neither corn nor wheat could be conveniently procured, the dealer asked if I could not use beans. These were found to be just the thing.

As the games were multiplied the bags were reduced in size. Within three years, at least forty bag exercises were devised. Twenty of these exercises or games are retained, and constitute our series of Bag Exercises. But for the dust the bag exercises are second to no others, save those with the rings. They cultivate quickness of the eye and hand, presence of mind, and in the series of twenty games afford a great variety of profitable exercise.

DUMB-BELLS.

Next in order the dumb-bells appeared; at first, very small iron ones, but soon it was observed that not only were they cold to the hand, but they were not sufficiently long to produce any considerable momentum in the twisting movements, or to enable the eye to take accurate and instant cognizance of their position. As the weight could not be increased, the wooden dumb-bell was suggested. This, for many reasons, is greatly superior to the metal bell.

THE WAND.

NEXT in order came the exercises with the wand. This piece of apparatus was introduced to my attention by Professor Langdon of New York.

Much time was given to the development of the wand series, but for reasons which I will not discuss, these exercises, although very valuable, have never maintained their due share of favor.

THE RINGS.

NEXT in order appeared the exercises with the rings, of which a somewhat full account is given in another place.

MUTUAL-HELP EXERCISES.

LAST of all, what we have named "Mutual-Help Exercises," a description of which will in part appear in this volume, claimed attention. Upon a series of exercises of this class, which shall be adapted to schools, we are at present engaged.

NORMAL INSTITUTE FOR PHYSICAL EDUCATION.

I HAVE written this brief history of our various series of exercises, which I fear will prove of little interest to the reader, and now venture a word of the "Normal Institute for Physical Culture."

After several years of invention and teaching, Boston was selected as the best field for the establishment of a Training School for teachers of the New System. In 1860 an act of incorporation was obtained, a corps of professors appointed, and on the 1st of July of that year the first session opened. The first class consisted of one person. Since then nine sessions have been held. More than two hundred and fifty persons have taken the diploma of the Normal Institute. Much instruction in Anatomy, Physiology, and Hygiene is given, with a thorough training in the New School of Exercises. Graduates of this Institution are now engaged in teaching in all parts of the Northern States. Three or four are very successfully occupied in the Pacific States, while one gentleman has, during several years, been teaching in London, England, with remarkable success.

MUSIC WITH GYMNASTICS.

A PARTY may dance without music. But the exercise is dull.

Exercises with the upper extremities are as much improved by music as those with the lower extremities. Indeed with the former there is greater need of music, as the arms make no noise, such as might secure concert in exercises with the latter.

A small drum, costing perhaps $10, which may be used as a bass drum, with one beating stick, is, I suppose, the sort of music most classes in gymnastics will use at first. It has advantages. While it is less pleasing than some other instruments, it secures more perfect concert. The violin and piano are excellent, but on some accounts the hand-organ is the best of all.

Feeble and apathetic people, who have little courage to undertake gymnastic training, accomplish wonders under the inspiration of music. I believe twice as much muscle can be coaxed out, under this delightful stimulus, as without it.

For gymnastic exercises, we always use music which has eight accented and eight unaccented beats in a measure. In describing the exercises I shall speak uniformly only of accented beats, (with special exceptions always named in their place.) The pupil always resumes, on the unaccented beat, the position with which he began the last preceding accented beat.

THE GYMNASTIC HALL.

The Gymnastic Hall should be on the ground floor, as in stamping and charging the building is a good deal shaken. It must be light and well ventilated. Exercise in a close, vitiated air, is

absurd. The atmosphere must likewise be free from dust, which stamping often produces. For this evil I have devised a remedy. The floor should be washed frequently, while in each pail of water, (which should be hot if convenient,) a half-pint of cheap molasses is dissolved. Proceed with the washing as if the water were pure. The dust in the cracks and under the thousand little splinters which are found upon the surface of most floors, is fixed by the sticky syrup. In my own halls we add one or two ounces of glue to the half-pint of molasses. This cure for dust is invaluable to the managers of dancing and gymnastic halls.

The hall should not be cold. A temperature below 50 degrees checks that free circulation of the blood which is *the* condition of muscle-growth. Perhaps the best plan is to raise the temperature to 65 degrees, and when the class begins to exercise, drop the windows, closing them again when the company would rest.

The floor of the Gymnasium should be marked, as shown in the cut. The painted feet should be about fifty inches apart lengthwise of the hall, and thirty inches apart sidewise.

The feet must have the relations exhibited in the cut. It will be observed that each pair is so placed that the pupil may extend his arms sideways without touching the extended arms of his



neighbors. A large piece of tin cut out in the shape of a pair of feet and laid on the floor, at the right points, may be used with a stencil brush to make the marks.

THE GYMNASTIC COSTUME.

The cuts will assist the reader to understand the costume adopted in the New Gymnastics. Men and boys exercising in an occasional class simply remove the coat and exercise in the ordinary dress ; but a costume made of flannel, in the style seen in the cuts, is better for regular work.

In the ladies' costume, perfect liberty about the waist and shoulders is *the* desideratum. Many ladies imagine if the skirt be short it constitutes the gymnastic costume. The skirt should be short, but this is of but little importance compared with the fit of the dress about the upper half of the body. The belt should be several inches larger than the waist, and the dress about the shoulders very loose. The best waist is a regular Garibaldi, with the seam on the shoulder so short that the arm-hole seam is drawn up to the top of the shoulder-joint. The stockings should, for cold weather, be thick woollen, and for appearance sake another pair of cotton stockings may be worn over them ; the shoes strong, with broad soles and low heels.

GYMNASTIC APPARATUS.

EVERY piece of apparatus should be of black walnut, very smooth, and kept scrupulously clean. To secure cleanliness there must be provided a place of deposit, easy of access, and free from dust.

The DUMB-BELLS should be three and a half inches thick for men, three inches for women, and two and a half inches for small children, with handles pleasant to the hand.

The RINGS should be made of three pieces of wood glued together. We make them six inches in diameter, with a body one inch thick.

The WAND should be four feet long and one inch thick for men and women, and about three feet long for small children.

The CLUB should be twenty inches long and four inches thick for men, eighteen inches long and three inches thick for women, and fifteen inches long and two inches thick for small people.

A WORD OF ADVICE TO TEACHERS.

I TAKE the liberty to advise you to introduce gymnastic exercises in schools, and in private classes, in the order published in this work.

Begin with a few exercises, say from five to ten,

and repeat them till your pupils can execute with accuracy. During the first lesson or two it is well to use the music but little, as many explanations will be needed, and as the exercises at first must be practised with great deliberation. In each succeeding lesson three to five additional exercises may be introduced. The teacher should insist that every pupil stand in his place, *with shoulders and head drawn well back*, and that the very best discipline be maintained throughout the lesson. It is wise to allow frequent recesses; but while the work is in progress perfect attention and silence should be maintained.

FREE GYMNASTICS.

The word *free*, as applied to gymnastic exercises, has come to mean, perhaps for no good reason, those movements in which the pupils exercise, each by himself, without apparatus. The possible variety of these movements is almost infinite. Many inventors and teachers preceded myself in this department. A French author devised more than a thousand movements.

The exercises in the following four series are in considerable part new, and have been used with satisfaction in the New Gymnasium. *The order is physiological.* Heretofore it has not been uncommon to

repeat consecutively a number of movements involving the action of the same set of muscles, producing not only fatigue but too strong a determination of the blood towards one particular group. The French author constantly fell into this grave error. His system is impracticable for this reason.

It will be observed that in the following arrangement *diffusion* has been sought. Besides, the physiologist will observe that the order provokes circulation always from the main blood-vessels toward their natural and successive distributions. Studied attention has been bestowed upon this physiological order, without which many of even the most important movements would fail to reach their best results.

While free gymnastics are less valuable than the exercises with apparatus, because of a too strong centripetal tendency in all unloaded exercises, they are nevertheless so convenient and susceptible of immediate use in the school-room, that they will always enjoy a certain popularity.

I advise teachers to use the order in the Free Gymnastics which appears in this book.

The Free Gymnastics, like the other series, should be taught with accuracy. If, for example, the teacher command a thrust of the fist upward, let it be exactly vertical. The teacher should require the class, and then groups of five or three, and

finally each individual, to execute this thrust until the vertical line is secured.

During the first days the wise teacher will introduce from five to ten exercises, and, running through the whole class, will secure an exact execution by each and all. This individual drill in the presence of the class leads to appreciation of accuracy, and affords opportunity for rest. Besides, the interest evoked secures against fatigue. It will be found in these series, as in all other gymnastic training, that permanency of interest rests upon accuracy in execution. No matter how spirited the teacher or fine the music, the interest will not be long maintained without studied accuracy; but with it the zeal of the average pupil will constantly increase.

ORDER OF FREE EXERCISES.

No. 1. — Standing in the attitude seen in Fig. 1, thrust the left hand down by the side twice, the right hand twice, alternately twice, and simultaneously twice. This completes one strain of the music.

No. 2. — Thrust the hands directly outward at the side, and repeat as in No. 1.

No. 3. — The same, but the thrusts are upward. Fig. 2.

The tendency, especially among girls, is to fail in thrusting the arms straight upward.

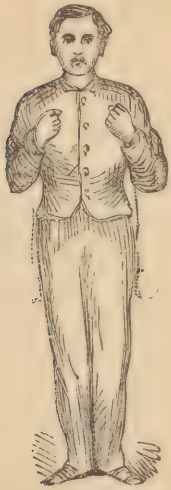


Fig. 1.



Fig. 2.



Fig. 3.

No. 4. — The same, but the thrusts are directly and horizontally forward. Fig. 3.

This thrust should always be exactly horizontal; and when both arms are thrust forward, they should move in parallel lines.

No. 5. — Thrust the left hand downward, and return once, the right hand the same, then both nearly simultaneously, the left, however, preceding the right by the fraction of a second; then both hands simultaneously.

No. 6. — The same movement, but the thrusts are sideways. This, with No. 5, completes one strain of music.

No. 7. — The same, upward.

No. 8. — The same, forward.

7 and 8, like 5 and 6, will fill one strain of music.

No. 9. — Thrust the left hand downward once, the right the same. This occupies two beats. Now two beats more should be given to clapping the hands, as seen in Fig. 4.



Fig. 4.

No. 10. — The remaining half of the strain is devoted to the same exercise, except that the thrusts are sideways.

No. 11. — The same, with the thrusts upward.

No. 12. — The same, with the thrusts forward.

No. 13. — Placing the hands upon the sides, step forward, as shown in Fig. 5. On the first beat the

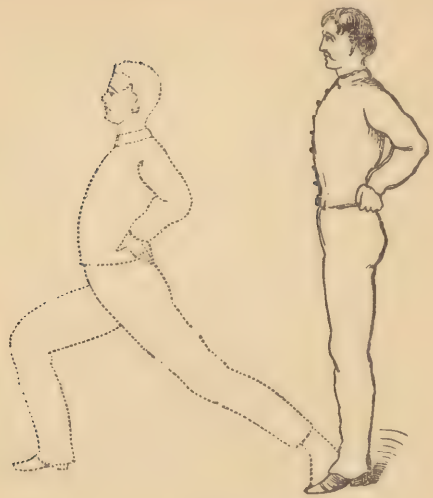


Fig. 5.

pupil steps forward, as shown in the cut; on the second, he steps diagonally forward to the left; on the third, directly sideways; on the fourth, diagonally backward to the left; on the fifth, directly backward; on the sixth, diagonally backward and across the other foot to the right; on the seventh, directly sideways to the right, behind the other foot; on the eighth, diagonally forward to the right, in front of the right foot.

No. 14. — The same with the right foot. The step of the right foot backward, and straight sideways to the left, behind the left foot, are shown in Fig. 6. The step sideways to the right of the right foot, with the position of the arms, &c., is shown in



Fig. 6.

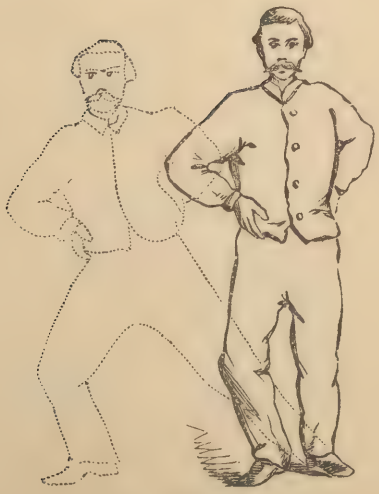


Fig 7.

Fig. 7. The step to the left, with the right foot in front of the left, is shown in Fig. 8.



Fig. 8.

No. 15. — Charge diagonally forward with the left foot, as shown in Fig. 9, stamping three times. In the first stamp the foot is carried forward its length, second stamp the same, third stamp the same, and on the fourth beat it comes back to the place of beginning. In this case both accented and unaccented beats are employed.

Same with the right foot.

Same with the left foot, diagonally backward.

Same with the right foot, diagonally backward. The stamp diagonally backward on the left side is shown in Fig. 10. The last four numbers occupy but one strain of music.

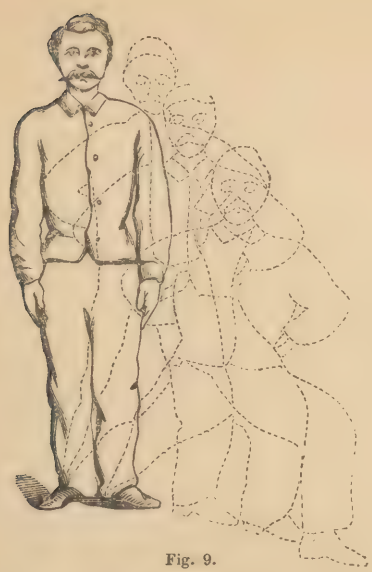


Fig. 9.

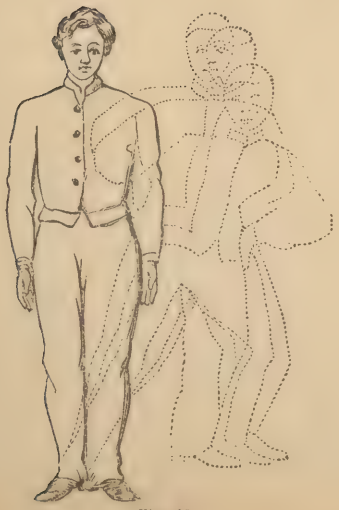


Fig. 10.

No. 16. — With the hands upon the sides, twist the body from side to side. Fig. 11. Eight beats.



Fig. 11.

No. 17. — Bend the body from side to side. Fig. 12. Eight beats.

No. 18. — Bend the body forward and backward. Fig. 13. Eight beats.

No. 19. — This is a difficult exercise to describe or to illustrate with a cut. It is, to some extent, a combination of the last two exercises. Standing upright, the hands upon the hips, bend to the left as far as possible ; then, without rising to the perpendicular, carry the body round so it is bent backward ; then, without rising, continue the twisting until the body



Fig. 12.



Fig. 13.

is bent to the right; still go on with the twisting in the same direction, until the body is bent forward. Now, without rising, go back through the same movements, first bending to the right, then backward, then to the left, then in front; and now, without stopping, come to the left again, and then behind, to the right, in front, and finally to the right, backward, to the left, and to the perpendicular. This exercise occupies two strains of music, as a motion is made only on the accented beats.

No. 20. — Turn the head from side to side, as in Fig. 14. Eight beats.

No. 21. — Bend the head from side to side, as in Fig. 15. Eight beats.



Fig. 14.



Fig. 15.



Fig. 16.

No. 22. — Bend the head backward and forward, as in Fig. 16. Eight beats.

No. 23. — This exercise is similar to No. 19. An attempt is made to illustrate it in Fig. 17.



Fig. 17.

No. 24. — Holding the arms directly in front, horizontal and parallel to each other, carry them a few degrees upward, and bring the elbows forcibly back. Eight beats.

No. 25. — With the arms horizontal and parallel in front, carry the left arm into the position shown in the dotted lines of Fig. 18, twice. Right arm the same. Alternately two beats, simultaneously two beats.

No. 26. — Beginning with the hands upon the chest, thrust downward, then out sideways, then upward, then forward. Now repeat. In this exercise the arms should be vigorously twisted while in the act of thrusting.

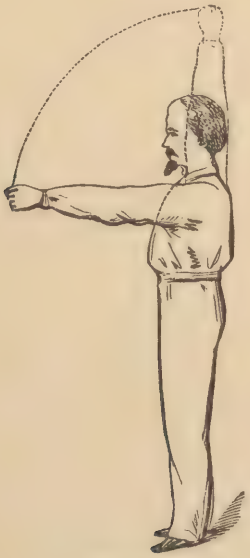


Fig. 18.

No. 27. — Touch the floor with the hands, without bending the knees, then bring the hands to the chest upon the unaccented beat, now thrust them directly upward, rising to the tips of the toes, then, on the unaccented beat, bring them to the chest, then to the floor, and continue through one strain of music. Fig. 19.



Fig. 19.

No. 28. — With the left foot step diagonally forward to the right, in front of the right foot, a long step, and clap the hands over the head, as shown in Fig. 20. Same with the right foot. Alternate through eight beats.

No. 29. Stamp with the right foot, then with the left, then charge diagonally forward with the left foot to the left, swinging the arms backward in the horizontal plane as you go forward, then rise on the unaccented beat to the position of the dotted line, and so continue through a strain. Fig. 21.

No. 30. The same on the right side.



Fig. 20.

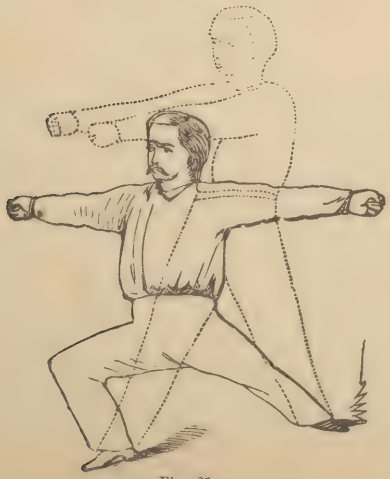


Fig. 21.

SECOND SERIES.

No. 1. — Beginning with the fists upon the chest, thrust the left downward, bring back to the chest, now thrust upward, and so continue through a strain. Same with the right hand. Eight beats. Same alternately, as seen in Fig. 22. Eight beats. Then simultaneously. Eight beats.



Fig. 22.

No. 2. — Thrust with the left hand directly sideways on the left side, once ; now thrust it in exactly

the opposite direction (on the right side). Alternate through a strain. Fig. 23. Same with the right hand. Eight beats. Next thrust both hands to the left, and then to the right in alternation. Eight



Fig. 23.

beats. Fig. 24. Then, four times to the left, consecutively, to be followed by four consecutive thrusts to the right.

No. 3. — Standing upright, hands upon the hips, thrust the left foot diagonally forward on its own side, three times, and stamp on the fourth beat. Then thrust the right foot the same, and stamp on the fourth beat. Fig. 25. Now, the same, backward. Fig. 26.

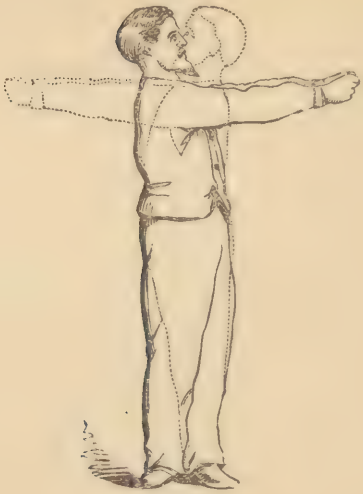


Fig. 24.

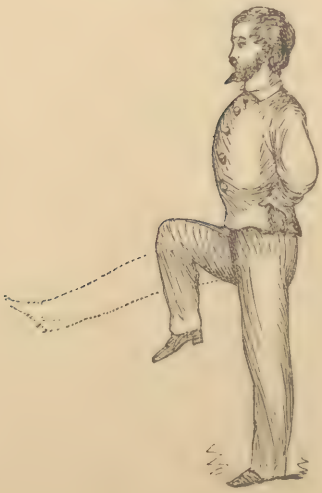


Fig. 25.



Fig. 26.

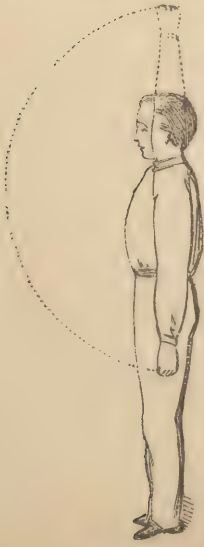


Fig. 27.

No. 4. — Upright, hands by the sides, carry the left hand from this position to the perpendicular over the head, without bending the elbow. Be sure it is exactly in front, so that, if both arms were being carried up at the same time, they would be parallel to each other. The left arm four times, right arm four times. Alternately, four beats. Simultaneously, four beats. Fig. 27.

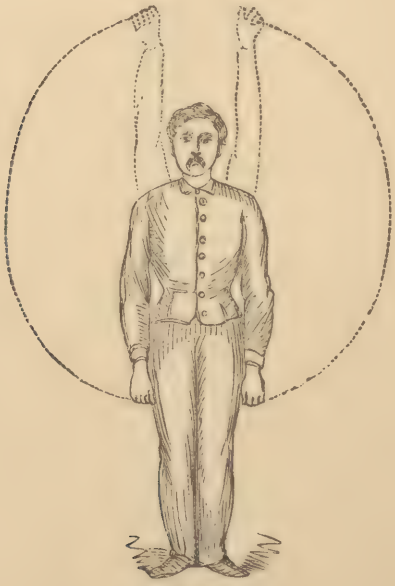


Fig. 28.

No. 5. — The same exercise, but the arms are carried up at the sides. Fig. 28.

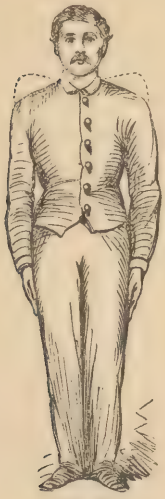


Fig. 29.

No. 6. — Hold the arms horizontal and parallel in front, and swing them directly backward, without bending the elbow, eight times. Be sure they do not, when reaching the backmost point, fall below the horizontal plane.

No. 7. — Raise the left shoulder directly upward as far as possible four times, right the same, alternately four beats, simultaneously four beats. Fig. 29.

No. 8. — Holding the closed hands by the side, spread them very wide, and thrust the fingers into the position seen in the dotted lines of Fig. 30.

The same at the sides. Fig. 31.

The same overhead. Fig. 32.



Fig. 30.



Fig. 31.



Fig. 32.

The same holding the hands horizontal and parallel in front.

The value of these four finger exercises turns upon a wide spreading of the fingers. To young ladies ambitious of ease in playing the piano this exercise is valuable.

No. 9. — Stand upright and swing the arms from side to side, as in mowing (Fig. 33), four beats. Continue the same movement, bending the trunk forward at an angle of forty-five degrees from the hip-joint, to the end of the strain. Fig. 34.

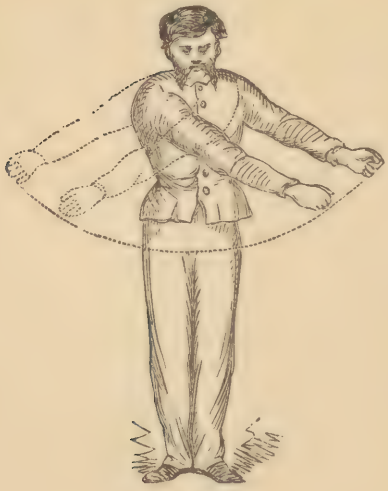


Fig. 33.



Fig. 34.

No. 10. — Hands upon the hips, draw the elbows together behind. Figs. 35 and 36.



Figs. 35, 36.



Fig. 37.

No. 11. — Thrust the hands diagonally forward and downward, four beats on the left side, and four beats on the right. Fig. 37.

No. 12. — Slap the hands about the chest and over the shoulders as wood-choppers do to warm their hands. Fig. 38. Eight beats.



Fig. 38.

No. 13. — Stamp the right foot, then the left, now a long step diagonally forward with the left foot on its own side, then sway backward and forward during the remainder of the strain. Same on right side. Fig. 39.



Fig. 39.

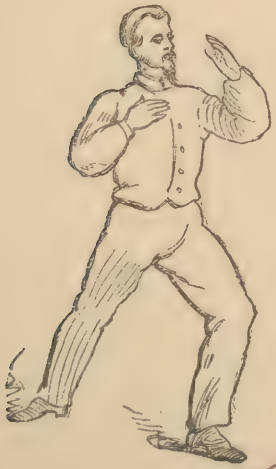


Fig. 40.

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THIRD SERIES.

No. 1. — Stamp the right foot, then the left, then a long step diagonally forward on the left side with the left foot, then inhale to the end of the strain. Now, holding the breath, percuss the chest from the collar-bone down to the stomach with the flats of the hands through a whole strain. Fig. 40.

Same, stepping forward with the right foot.

Same, stepping diagonally backward with the left foot.

Same, stepping diagonally backward with the right foot.

No. 2. — Joining the hands just under the shoulder-blades upon the back, thrust them vigorously downward eight times. — Fig. 41.

No. 3. — Hold the arms by the side with clenched hands, and twist the arms vigorously four times. Hold them out at the sides and repeat. Fig. 42. Over the head the same. Horizontally in front the same.

No. 4. — Hold the arms horizontally in front, with the palms of the hands in contact. Now, *without bending the elbows*, draw the hands alternately backward and forward, if possible, drawing each hand entirely off the other. In this exercise the hands must not be moved from side to side, but must main-



Fig. 41.



Fig. 42.

tain the same position in front. This is a particularly valuable exercise for rigidity of the shoulders. Fig. 43.



Fig. 43.

No. 5. — Holding the arms loosely by the sides, make a large circle with the point of the shoulder from behind forwards, first with the left shoulder four times, then with the right four times. Alternately, four beats. Simultaneously, four beats. Fig. 44.

No. 6. — The same, but the circle should be made from before backward. Fig. 45.

No. 7. — Holding the fists firmly in the armpits, thrust downward four times with the left hand, four



Fig. 44.



Fig. 45.



Fig. 46.

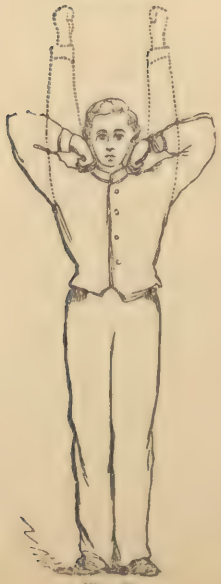


Fig. 47.

times downward with the right hand. Alternately, four beats. Simultaneously, four beats. Fig. 46.

No. 8. — Holding the hands upon the top of the shoulders, repeat No. 7, only the movements are upward as in Fig. 47.

No. 9. — Holding the left fist in its armpit, and the right fist on the top of the right shoulder, thrust the left downward and the right upward. Four beats. Now with the right fist in the armpit, and the left on the top of the shoulder. Thrust downward and upward four times. Alternately, four times.

When the hand which is thrust downward is to be



Fig. 48

carried to the top of the shoulder, instead of bringing it up in front of the chest with the bent elbow, carry it directly outward at the side, keeping the arm straight, and not bending the elbow till you have passed the horizontal line. Eight beats. Now simultaneously, eight beats. An attempt is made to illustrate this circle outward at the side in Fig. 48.

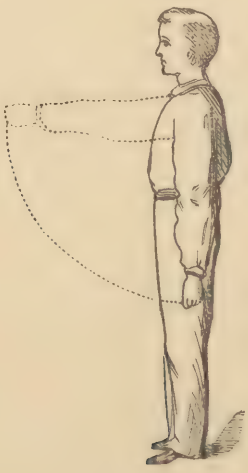


Fig. 49.

No. 10. — Standing in the position seen in Fig. 49, carry the left arm to the horizontal in front with much force, stopping exactly in the horizontal plane. Right arm the same. Alternately, four beats. Simultaneously, four beats.

No. 11. — Holding the arms horizontal in front,

carry them to the perpendicular over the shoulders in the same order as in the last figure.

No. 12. — At the close of No. 11, the arms being perpendicular over the head, move the whole body with the arms from side to side. The motion of the body is illustrated in Fig. 12 of the Free Gymnastics.

No. 13. — Stamp the right foot, then the left. Now a long step diagonally forward with the left foot, looking backward over the right shoulder. Hold in this position through eight beats. Same on the right side. Same diagonally backward on the left side. Same diagonally backward on the right side.

FOURTH SERIES.

In the fourth and concluding series a number of exercises which have already appeared in the preceding series are repeated, most of them with variations more or less important.

No. 1. — Hold the left foot a little from the floor, diagonally forward, and make a circle with its toe through four beats. Same with the right foot. Fig. 50.

No. 2. — Crossing the hands on the back, thrust them downward eight times. Fig. 51. Let this be done with great force.

No. 3. — Standing on the right foot, make a circle



Fig. 50.



Fig. 51

at the side with the left, from behind forward. Four beats. Same with the right foot. Fig. 52.

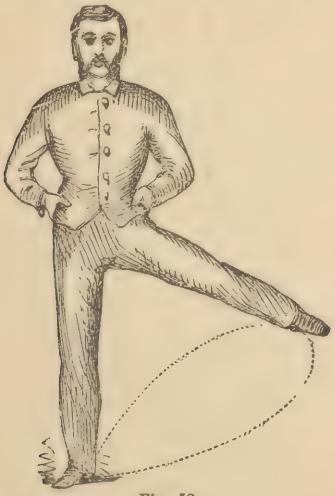


Fig. 52.

No. 4. — Interlock the fingers on the back of the head, and draw the head just as far backward as possible, and hold there, pulling forward with your hands with as much force as possible. Eight beats. Fig. 53.

No. 5. — Holding the hands upon the back, as seen in Fig. 54, thrust diagonally downward and backward. Eight beats.

No. 6. — Execute the movement seen in Fig. 55, eight times.

No. 7. — Hands upon the hips, draw the elbows with great force backward, and try to touch them. Eight times. Fig. 56.



Fig. 53.



Fig. 54.

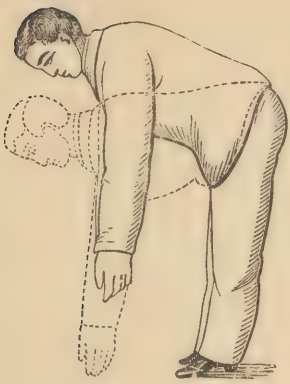


Fig. 55.



Fig. 56.

No. 8. — Placing the hands upon the hips, sit down upon the heels. Eight times. Fig. 57.



Fig. 57.

No. 9. — Bend backward, as seen in Fig. 58. Eight beats.

No. 10. — Thrust the left hand, the first time directly upward, and then three times as seen in Fig. 59. Right the same.

No. 11. — Bend from side to side, as seen in Fig. 60, eight times. It will be observed that this is a more vigorous exercise than No. 12 in the first series. It is fairly presumed that persons who have worked up to this point successfully may intensify this very difficult but profitable exercise.

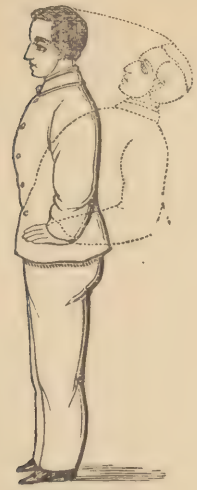


Fig. 58.

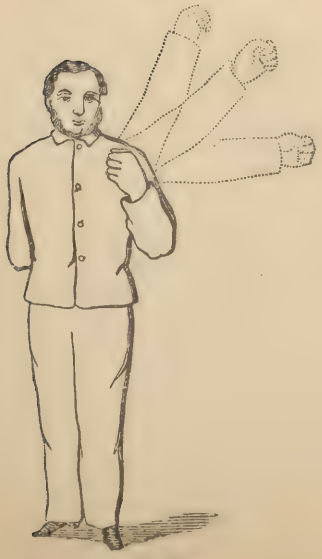


Fig. 59.



Fig. 60.

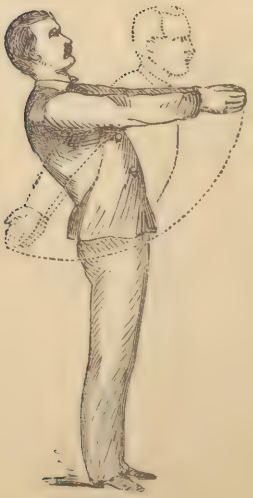


Fig. 61.

No. 12. — Execute the movement represented in Fig. 61, eight times.

No. 13. — Draw the knee of the left leg into the position seen in Fig. 62, four times. The right knee the same.



Fig. 62.

No. 14. — Execute the movement seen in Fig. 63, very slowly, only moving on the accented beats.

No. 15. — Holding the left hand upon the side, with the right arm over the head, bend towards the left and take four deep breaths. Same on the other side. Fig. 64.

No. 16. — Hold the hands as in Fig. 65, and thrust them vigorously backward, as seen in the dotted lines. Eight times.

No. 17. — Carry the left foot forward, and perform a semicircle with the toe, four times. Same with the right foot, four times. Fig. 66. Eight beats.



Fig. 63.



Fig. 64.



Fig. 65.



Fig. 66.

No. 18. — Interlocking the fingers upon the back of the head, and drawing the head backward as vigorously as possible. Sit down on the accented beats eight times. Fig. 67.



Fig. 67.

No. 19. — Carry the left foot and the right in alternation, each in the direction represented in the dotted lines. Fig. 68. If the pupils cannot balance without using their arms, the position of the hands upon the hips may be abandoned.

No. 20. — Draw the hands backward and forward without moving from side to side, Fig. 43, (keeping the elbows stiff as in that exercise,) holding them horizontal in front. Four beats. Then carry them down into a position near the person, and thrust the

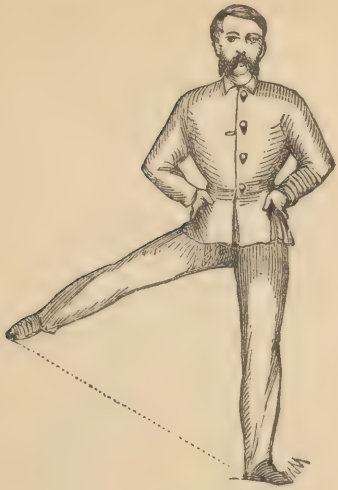


Fig. 68.

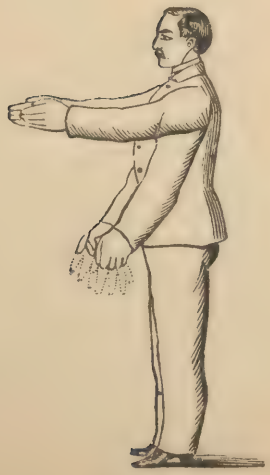


Fig. 69.

fingers widely and vigorously outward. Four beats, as seen in Fig. 69.

No. 21. — Perform the exercise seen in Fig. 70, eight times, alternating the hands.



Fig. 70.

No. 22. — Strike the attitude seen in Fig. 71, four times on either side, filling two strains of music.

No. 23. — Strike the bold and effective attitude seen in Fig. 72, and maintain it during four beats on either side.

No. 24. — Now change the music to such as would be used in rapid dancing, and hop, four times on the left toe, four times on the right toe. Alternately,

four times, as seen in Fig. 73, and simultaneously, four times.

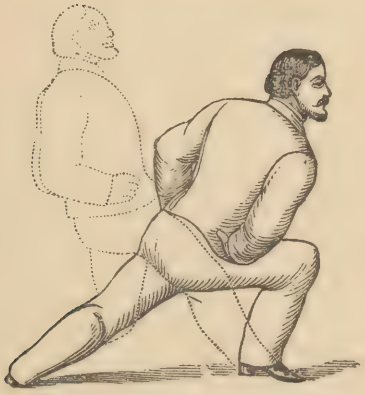


Fig. 71.



Fig. 72.

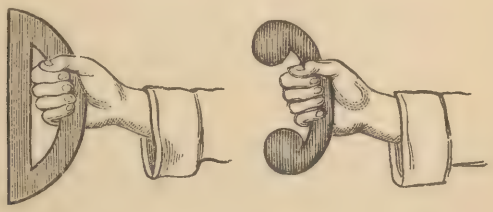
Make a skipping exercise backward and forward, the two feet passing each other through eight beats. Then hop with both feet eight times, crossing the feet each time on coming to the floor.



Fig. 73.

DUMB-BELLS.

THE dumb-bell has been in use more than two thousand years. It was highly prized by the Greeks, among whom it obtained the peculiar forms seen in the cut.



WEIGHT OF THE DUMB-BELL.

HERETOFORE, heavy iron bells have been preferred. The German Gymnasium has approved those weighing from fifty to one hundred pounds, but more recently Schreber and other magnates in German gymnastics have condemned such weights, and advocated bells weighing from two to five pounds.

In my own early experience as a teacher of gymnastics, I advocated heavy dumb-bells, prescribing for those who could put up one hundred pounds a bell of that weight; and, as my success had always

been with heavy weights, pride led me, I fear, to continue their use long after I doubted their value.

PHILOSOPHY OF THE LIGHT WEIGHTS.

It is said that dumb-bells of two pounds' weight may do for women and children, but cannot answer the requirements of strong men.

The weight of the dumb-bell must be determined by the manner of its use. If only "put up," one or two pounds would be absurd; but if used as in the New Gymnastics, one of ten pounds is beyond the capacity of the strongest.

Some years ago we enjoyed a hearty laugh at the expense of a class of young men who, in our Gymnasium, organized an insurrection against the wooden dumb-bells. Through a committee they asked for iron ones. I procured some weighing three pounds. The young men used them part of one evening, but when asked, on assembling the following evening, which bells they would have, replied, "The wooden ones will do."

If the dumb-bell is to be used as in the German Gymnasium, — if it is simply to be put up and then put down again, — of course it should be heavy; else there is no exercise. But if used in a great variety of ways, the performer assuming numberless attitudes and moving the half-thousand mus-

cles, each and all in turn in every possible way, the bell must be light. There need be no controversy. We of the "light-weight" party agree that if the bells are used as you of the "heavy-weight" party use them, they must be heavy, but if as we use them, then they must be light. If any of you doubt it, we ask you to try our exercises with heavy weights.

A man has five hundred muscles, some of them almost microscopic, others of prodigious size. These muscles are longitudinal, transverse, oblique, — interwoven in a most wonderful manner; long and patient study are required to master their relations. Who can suppose that slow, heavy, direct, and simple movements can answer the demands of this varied and wondrous structure?

The highest physiology demands a balanced, harmonious development of the motor apparatus. This is secured only by a balanced and harmonious exercise of the entire muscle structure. In this view the thoughtful reader will comprehend the great value of the scores of attitudes and movements involved in the exercises of the New School. The muscles of every part, — the longitudinal, transverse, and oblique, — all come in for their share of the work.

No physiologist, after a moment's thought upon the subject as thus presented, can hesitate to declare for apparatus of such weight as will permit

the entire muscle structure to participate in the training in the most varied and complete ways.

THE MODEL GYMNAST.

We visit the circus. Let us study three persons, — the man who lifts the cannon, the India-rubber man, and the general performer. The lifter and the India-rubber man are the extremes; neither is in the highest physiological condition. The general performer is our model. He cannot lift a cannon, nor tie himself in a knot. He occupies a midway point between the two extremes. He is neither the slow cart-horse nor the loose-jointed animal, but he is the fine, active, agile, vigorous carriage-horse. He is, in a certain sense, strong; but it is the strength of grace, flexibility, agility, and endurance.

TRAINING OF HORSES.

My neighbor owns a score of superior, fast horses. He is training them for the market. He owns likewise a number of cart-horses for his farm work. Passing his estate I observe the cart-horses tugging away at great loads; but the horses which he trains for carriage service are driven before light wagons. My neighbor is wise about the education of this

animal. We will call upon him. You believe in heavy gymnastics. I believe in light gymnastics. We seek his modes of training horses. You shall do the talking.

"Mr. M., why don't you put these horses which you train for the carriage before the cart?"

"It would spoil them."

"Spoil them! nothing would so contribute to the size and strength of their muscles. See what immense legs your cart-horses show!"

"I doubt not a heavy cart would increase the size of their muscles, but it would develop certain of the large muscles only, and even these would acquire little freedom of motion."

"But don't you think a carriage-horse should be strong?"

"Yes, but not the strength that is displayed in the slow, limited movements of the cart-horse. He should be trained to wide, free, dashing motions; this is indispensable to carriage service. If worked before a cart, and required to draw heavy weights by slow and great exertions, he would soon be capable of no other movements."

"Do you think that fine, spirited horse yonder could be changed into a slow, stiff cart-horse?"

"Nothing is easier; one or two years of cart work would accomplish it. Besides, I have several cart-horses that you would little suspect of style,

which my trainers could change in a year or two to fine, stylish carriage-horses."

"Don't you think there is a born difference?"

"Undoubtedly, but there is a wide range left for education. Now observe that cart-horse approaching us; see how slowly he moves his limbs. For several years he has worked at heavy loads. The man walking by his side has the same gait. He has likewise been engaged in slow, heavy work. I can change the man and the horse in time so that you would hardly know them."

"But don't you think they are stronger now than they would be after such light training?"

"Yes, stronger for heavy loads, but not so capable of rapid, flexible, and agile movements."

"But don't you think, sir, the man and horse are more healthy in their present condition?"

"By no means; these fine carriage-horses are quite as healthy as those working before the carts; and they have a still more vigorous circulation. See the veins stand out upon that light-stepping creature! A year of cart service would nearly bury them, while a year of the best carriage training would develop the same large veins upon this cart-horse. The fact is the carriage-horse has a higher and nobler life than the cart-horse. He runs through the whole range of his capacities, while the cart-horse is in a state of comparative dormancy."

Passing by the cart-horses among men, those who for any reason must devote their lives to bearing heavy burdens, and considering those classes only whose physical training is the subject of scientific consideration, may I not say, that the movements involved in the pleasures and business of their lives correspond to those required in the fine carriage-horse.

The physiological laws brought to light in this conversation with my neighbor are applicable to man. Lifting great weights affects him as drawing heavy loads affects the horse. So far from man's body being an exception to this law, it bears with peculiar force upon him. Moving great weights through small spaces produces a slow, inflexible man. No matter how flexible the boy of sixteen, let him engage in carrying heavy bags up stairs, or in unloading barrels of flour, and in five years he will become as inflexible as a slow cart-horse.

INFLUENCE ON THE NERVOUS SYSTEM.

When we consider that the nervous system is the central fact of our life, that its elastic, vigorous condition is, after all, the aim of all hygienic measures, the superiority of the New School of physical culture becomes most striking.

Can any one doubt that boxing and small-sword

drill will do more to give elasticity and tone to the nervous system than lifting kegs of nails? Is not a more complete marriage of nerve and muscle the physiological purpose of all this physical training? And can any one doubt for a moment that the almost infinite variety of graceful, dashing movements, the difficult attitudes, the skilled poise, and the complete combinations seen in the exercises of the New Gymnastics are superior to lifting heavy dumb-bells, and the other heavy, straining work advocated by the "lifting" school?

IMPORTANCE OF ACCURACY.

WITHOUT accuracy in the performance of the feats, the interest must be transient. This law finds exemplification in military training. Those who have studied our infantry drill have been struck with its utter simplicity, and have wondered that men can, without disgust, repeat its details daily for years. If, indeed, the drill-master permit carelessness, authority alone can force the men through the evolutions; but if he enforce the greatest accuracy, they return to their task every day with fresh and increasing interest.

What accuracy is possible in heavy dumb-bell, and other slow and heavy movements? But in the exercises of the New School there is opportunity

for all the accuracy inculcated in the most elaborate military drills.

I was a student of boxing and fencing under the best masters. In neither is there such a chance for fine posturing, wide, dashing motion, and studied accuracy as is found in the New Gymnastics.

THOROUGH WORK IN THE NEW SCHOOL.

But it is said if you use bells weighing only two pounds you must work an hour to reach the exercise which the heavy bells will furnish in ten minutes. I need not inform those who have practised the New Gymnastics that this objection is made in ignorance. On the contrary, if you work to the full, in less than fifteen minutes, legs, hips, back, arms, shoulders, neck, lungs, and heart will all plead for rest.

INFLUENCE UPON THE LUNGS AND HEART.

One of the great advantages of the exercises of the New School is found in the complete action of the organs of the chest. Speaking in a general way, those exercises in which the lungs and heart are made to go at a vigorous pace are among the most useful. The double-quick of the soldier con-

tributes more in five minutes to his digestion and endurance than the ordinary drill in two hours.

In conclusion upon this point, I would suggest, that, as our artificial training is designed to fit us for the more successful performance of the business of life, the training should be in character somewhat assimilated to the average motions involved in the performance of these duties. If you would train a horse for the carriage, you surely would not prepare him by a slow pace before a heavy load! If you did, the first fast drive would go hard with him. Just so with a man. If he is to lift hogsheads of sugar or barrels of flour as a business, he may be trained by heavy lifting; but if his business requires the average velocity and free motions of other human occupations, then, upon the basis of a heavy, slow training, he would find himself in the condition of the dray-horse who is pushed before the light carriage.

Much is said of the exhaustion of the movements of the New School. All this talk about expenditure of vitality is full of sophistry. Writers speak of our stock of vitality as of a vault of gold, upon which you cannot draw without lessening the quantity; whereas it is rather like the mind and heart, enlarging by action, gaining by expenditure. It is not true that in either intellectual or physical training, bold, brilliant efforts, under proper conditions

and limitations, exhaust the powers of life. On the contrary, it is in vigorous, bold, dashing, brilliant efforts that we acquire bold, dashing, and brilliant powers.

Therefore, I advise that persons of both sexes and of all ages, possessing average vitality, should, in the department of physical education, employ light apparatus and execute a great variety of feats which require skill, accuracy, a quick eye and hand, presence of mind, and courage, — in brief, which demand a vigorous and complete exercise of all our powers.

SIZE AND QUALITY.

THE "big-muscle" men seem to appreciate nothing but size. They think we can determine constitution and health by the tape line; that all exercises whose results are not determinable by measurement are worthless. Need I say that there are other conditions of brain, muscle, and other tissues far more important than size. Surely it is only this mania for monstrous arms and shoulders that could have misled the intelligent gymnast on this point.

DUMB-BELL EXERCISES.

MANY of the exercises with the bells, it will be observed, consist of what are known as a Movement and an Attitude. In every case the first half of the strain of music, or the first four beats, is devoted to the movement, the second half to the attitude, in which there is no movement. If this is kept in mind it will prevent all confusion in the descriptions of these exercises.

No. 1. — Hold the dumb-bells in the position seen in Fig. 1. They should be precisely in the same



Fig. 1.

line, so that a straight rod passing lengthwise through one, would, if continued, pass through the

other. Pupils generally fail in this. The teacher should insist upon exactitude in this beginning position. The pupil should be watched and corrected till this position is secured. Now twist the dumb-bells half way round, so they shall have exactly the same position as in the cut, only the back of the hand is forward instead of backward. Repeat this four times. Bring the bells to chest on fourth unaccented beat.

Attitude. — Left foot diagonally forward, long step. Body half-way to floor. Body and right leg in a straight line. Turn face over left shoulder. Keep still four beats.

No. 2. — Hold the dumb-bells in the position seen in Fig. 2. Secure great accuracy. Twist four times, just half way round.



Fig. 2.

For the *attitude* charge on the right side, just as in No. 1 you charged on the left. The twisting occupies four beats; the attitude should occupy four.

No. 3. — Hold the dumb-bells as in Fig. 3, the arms exactly horizontal and the dumb-bells precisely parallel to each other. Twist four times. This exercise occupies four beats.



Fig. 3.

For the *attitude* charge the left foot diagonally backward, dumb-bells at the sides, as in Fig. 4, while the head is turned over the left shoulder.

No. 4. — Holding the dumb-bells in the position seen in Fig. 5, with the arms exactly perpendicular and parallel to each other, and with the dumb-bells



Fig. 4.



Fig. 5.

in exactly the same line, twist them as before four times, turning them just half way round, as in the other twists.

Let the *attitude* be the same as in Fig. 4, only on the other side.

No. 5. — Hold the dumb-bells in the position seen in Fig. 6. This position I may remark is very important. (The artist has bent the wrist, which is



Fig. 6.

wrong.) There is perhaps nothing in the whole dumb-bell series as useful as this attitude. The bells should be just as far apart as the points of the shoulders, and quite perpendicular and parallel to each other The elbows must be drawn far behind, and the wrists must not be bent. Thrust downward, as in Fig. 7. Bring back to the chest, always being

careful to carry them to exactly the same position on the chest. Now thrust them outward, as in Fig. 8.



Fig. 7.



Fig. 8.

Now thrust them upward, as in Fig. 9. Back to the chest again. Thrust forward, as in Fig. 10.



Fig. 9.

Attitude (Fig. 11). If the back suffers in this attitude, use Fig. 12, feet together.

No. 6. — Repeat this exercise, with the same attitude on the right side. (I may remark, that when the dumb-bells are thrust downward by the sides, they should be exactly horizontal and parallel to each other; when they are thrust outward at the sides, they should be exactly perpendicular and parallel; when they are thrust upward, they



Fig. 10.



Fig. 11.



Fig. 12.

should be exactly horizontal and parallel, and when thrust forward, they should be perpendicular and parallel. Every good teacher will study to secure this accuracy. I should prefer to have a class learn only these four movements, and do them well, than to have them learn the whole series, and execute them in a loose and careless way.)

No. 7. — Holding the dumb-bells by the sides, draw the left dumb-bell into the armpit, once; then the right dumb-bell once, simultaneously two beats. Fig. 13.

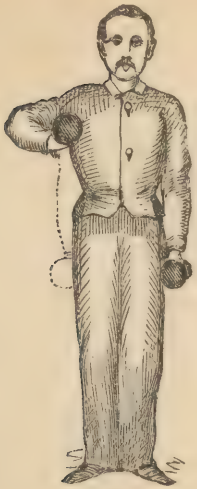


Fig. 13.

It is important that the elbow should be thrust out sideways as nearly as possible. If the elbow is carried as far backward as is represented in Fig. 14, the exercise will fail to reach its legitimate uses. In this movement, when the dumb-bell strikes in the armpit, it must be exactly horizontal.

The *attitude* is sitting down upon the heels, the dumb-bells on the floor.

No. 8. — Holding the dumb-bells on the top of the shoulders, thrust the left one up once, the right one once, simultaneously twice.

The attitude is found in thrusting the dumb-bells directly upward and rising to the tips of the toes, holding in this position four beats.



Fig. 14.



Fig. 15.



Fig. 16.

No. 9. — Holding the dumb-bells as in Fig. 15, twist four times as in the previous twisting.

For the attitude charge with the left foot diagonally forward, turning the face over the shoulder, as in Fig. 16.

No. 10. — With the left arm directly upward, palm in front, right arm horizontal, outward at the side, palm upward, twist dumb-bells just half way round, observing great precision.

The *attitude* for this exercise, which should occupy the last four beats of the measure as usual, is the mate to the attitude shown in Fig. 16.

No. 11. — Right arm held perpendicular over the

shoulder, palm in front, the left arm horizontal, outward at the side, Fig. 17, twist four times.



Fig. 17.

Attitude, charge diagonally backward with the left foot (Fig. 4), hands on the sides, but look over the right shoulder.

No. 12. — Hold the dumb-bells in the position represented in Fig. 18, and twist four times.

The *attitude* is the mate to that described in No. 11.



Fig. 18.

SECOND SERIES.

No. 1.—Dumb-bells upon the chest, thrust the left hand downward, bring back to the chest, thrust it upward, back to the chest. Now the right hand the same. This will fill four beats.

Attitude seen in Fig. 20, only the left arm is behind.

No. 2. — The next exercise is mostly a repetition of the last. The dumb-bells upon the chest, the left hand is thrust downward and the right hand upward at the same time; then the left is thrust

upward and the right downward (Fig. 19); then both hands are thrust downward and both upward.



Fig. 19.

The attitude is the mate of the last one, and is seen in Fig. 20.

No. 3. — Dumb-bells upon the chest, thrust the left bell directly forward once, right once (Fig. 21), simultaneously twice.

Attitude. — Turn suddenly, facing towards the left, charge into the attitude seen in Fig. 22.

No. 4. — Holding the bells directly in front, arms straight, horizontal and parallel, twist the body without altering the relation between the arms as



Fig. 20.



Fig. 21.



Fig. 22.

far to the left as you can, without moving the feet, on the unaccented beat bring them in front, on the next accented beat carry them to the right as far as you can turn, on the unaccented, back to the front, and so continue through the first half of the measure.

The attitude is the counterpart of the last.

No. 5. — Arms horizontal and parallel in front. Swing the left arm vigorously backward over the shoulder without bending the arm, two beats, right the same (Fig. 23), alternately two beats, simultaneously two beats.

No. 6. — Arms held as in Fig. 24, left and right are swung up alternately to the perpendicular, as seen in the dotted line of the figure, through four beats; then simultaneously four beats.

No. 7. — Arms in the horizontal position in front,

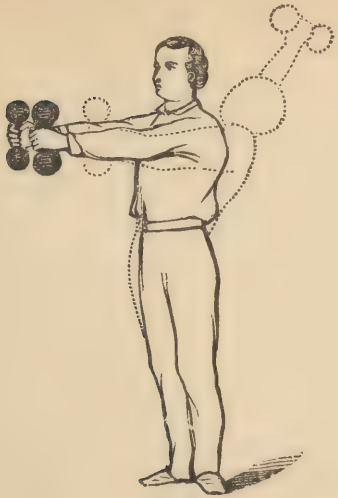


Fig. 23.

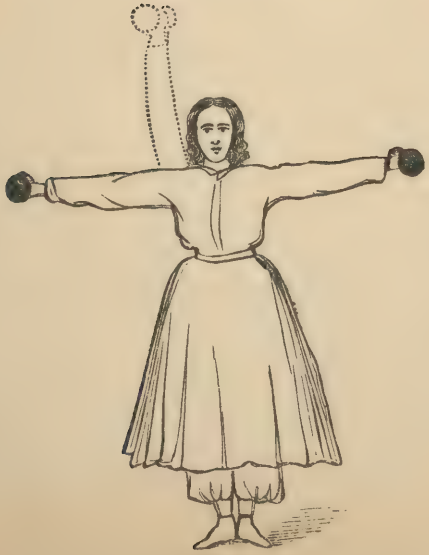


Fig. 24.

swing the left one in the horizontal plane as far round behind without bending the elbow as possible, two beats, right arm twice, both arms alternately two beats, and simultaneously twice, being careful to keep in the horizontal plane.

No. 8. — In the next exercise you turn on the feet a quarter of the way round, facing towards the left of your former position. Now, beginning with the dumb-bells on the chest, thrust the left hand directly backward and the right hand forward; then the right backward and the left forward. Repeat, occupying four beats. The attitude is a repetition of Fig. 22, except that the charge is towards the end of the hall, where the leader stands.

No. 9. — Face in the direction exactly opposite that in which you stood in the beginning of the last exercise, or to the right of your usual position in the hall. While thus standing, turn suddenly to the left without moving the feet, and thrust the dumb-bells straight upward. Turn now as far round to the right as you can without moving the feet, and thrust directly upward. Repeat, filling four beats.

Attitude the same as Fig. 22, except that you charge down the hall away from the leader.

No. 10. — Pupil upright, arms horizontal and parallel in front, bring the dumb-bells forcibly into the position seen in Fig. 25, four times.



Fig. 25.

The attitude of this exercise is represented in Fig. 26.



Fig. 26.

THIRD SERIES.

No. 1. — Stamp with the right foot, then with the left, charge into the position seen in Fig. 27. In this attitude, maintaining the same position of the arms, sink downward and return again twice, thus occupying half the strain. Stamp the left, then

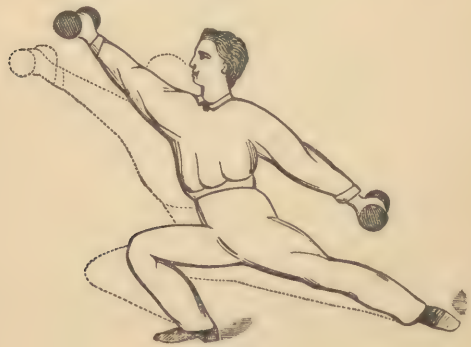


Fig. 27.

the right, and perform the same on the right side.

No. 2. — Hands by the sides, bring the left arm in front to the perpendicular over the shoulder twice, right twice, alternately two beats, simultaneously two beats.

No. 3. — Stamp the right foot, then stamp the left, and charge out sideways to the left, rising and sinking, as in Fig. 28, thus occupying half a strain.

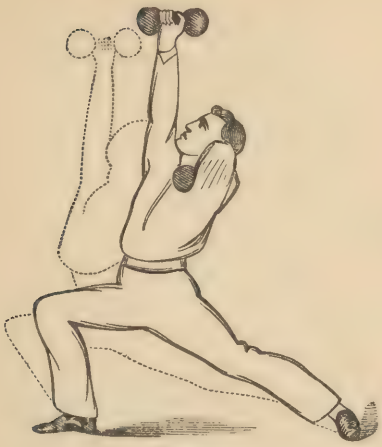


Fig. 28.

Then stamp the left foot, the right, and charge to the right to fill up the other half of the strain.

No. 4. — Dumb-bells by the sides, swing the left without bending the elbow to the perpendicular overhead, then the right, &c., &c. Let the line of movement be at the side instead of in front, as in the previous exercise, eight beats.

No. 5. — After the regular stamping the pupil should charge in the manner illustrated in Fig. 29. Fill up half the measure on one side and half on the other side.

No. 6. — Begin in the position represented in the plain black lines of Fig. 30. Now make a grand circle in the direction seen in the dotted line in the



Fig. 29.

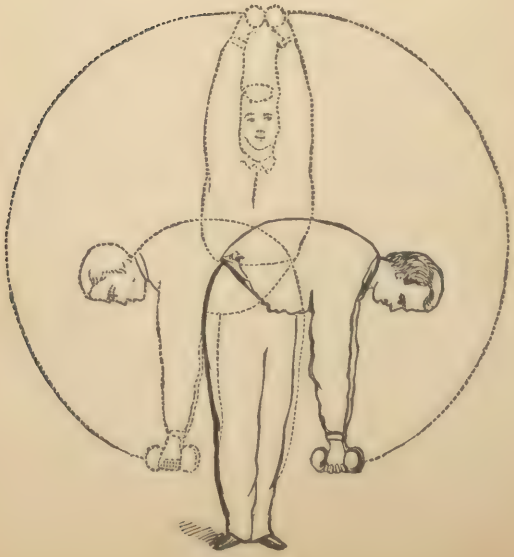


Fig. 30.

figure, and so swing from side to side through eight beats.

No. 7. — Taking the position seen in Fig. 31, but on the left side, thrust alternately and simultane-



Fig. 31.



Fig. 32.

ously, as seen in Fig. 32, through the whole strain. Repeat, charging to the right.



Fig. 33.

No. 8. — Dumb-bells in front of the chest as seen in Fig. 33. Now draw the elbows directly backward in a horizontal plane through a whole strain.

No. 9. — Stamp the right foot, then the left, then step the left foot diagonally forward a short step, say one foot, at the same time swinging up the arms into the position seen in Fig. 34, and immediately bring the dumb-bells down to the position seen in Fig. 35, then into the position seen in Fig. 36.

No. 10. — Stamp the left foot, then the right, and repeat the same on the other side.

No. 11. — Stamp the right foot, then the left, and



Fig. 34.



Fig. 35.



Fig. 36.

charge a long step to the left, and move the right arm, as seen in Fig. 37, eight beats. The same on the other side.



Fig. 37.

No. 12. — Arms horizontal and parallel in front, dumb-bells perpendicular, swing in the horizontal plane directly backward as far as possible, eight times. (Fig. 38.)

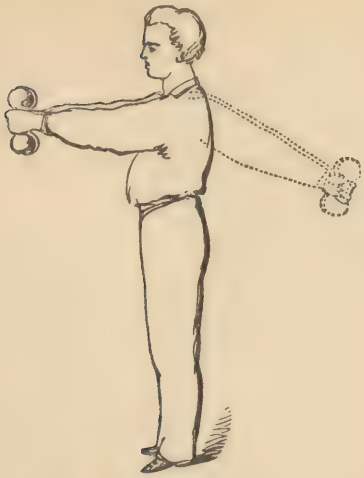


Fig. 38.



Fig. 39.

No. 13. — Stamp the right foot, then the left, then charge diagonally forward with the left foot, at the same time thrusting the bells directly upward, left, right, alternately, simultaneously (Fig. 39). The simultaneous movement is seen in Fig. 40.



Fig. 40.

No. 14. — Dumb-bells on the chest, thrust them directly forward, alternately, through a whole strain, as was done in Fig. 3, Free Gymnastics.

No. 15. — Stamp with the right foot, then with the left, step diagonally backward with the left foot and thrust the two hands upward alternately, two beats (Fig. 41), and simultaneously, as in Fig. 42.

No. 16. — The same on the other side.



Fig. 41.



Fig. 42.

FOURTH SERIES.

No. 1. — Holding the dumb-bells on the chest, thrust the left dumb-bell out sideways, and as far back of the sideways line as convenient, and bring it around in a large sweep, keeping it however in the horizontal plane, and bring it back to the chest, two beats, the right arm the same, two beats, alternately two beats, and simultaneously two beats. (Fig. 43.)

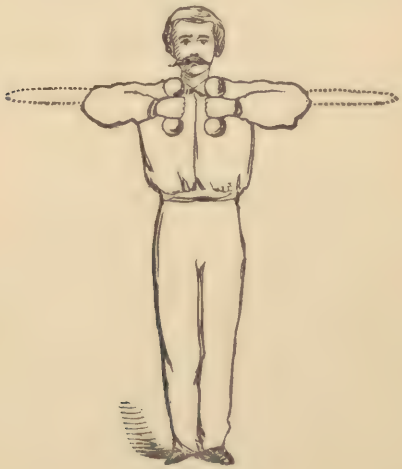


Fig. 43.

No. 2. — Holding the dumb-bells by the side, turn quickly to the left without moving the feet, and bring the dumb-bells into the position seen in Fig.

12. Bring down to the sides again, turn suddenly as far to the right as possible without moving the feet, and swing the dumb-bells up as before; so alternate through a whole strain.

No. 3. — Beginning with the dumb-bells upon the chest, sit down and touch the floor with the bells, as seen in the dotted line of Fig. 44. Then return them to the chest, rise to the tips of the toes and thrust the dumb-bells as high as possible, and alternate between these two movements though a whole strain.

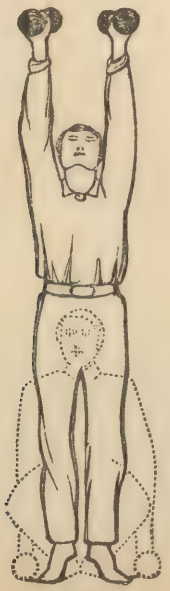


Fig. 44.

No. 4. — Holding the dumb-bells on the tops of the shoulders, thrust the left directly out at the side twice, the right one twice, alternately two beats, simultaneously two beats. (Fig. 45.)

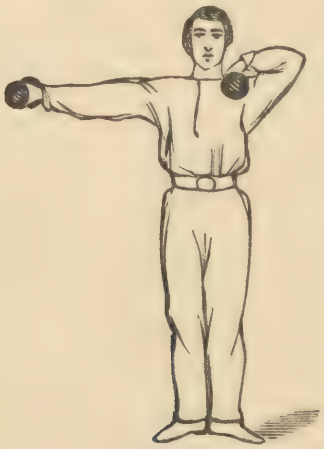


Fig. 45.

No. 5. — Begin with the dumb-bells on the chest in front, thrust horizontally in front, carry them up so as to bend backward, then bring them down again to the horizontal in front, and to the floor (Fig. 46), eight beats.

No. 6. — Stamp with the right foot, then with the left, then charge to the left as in the dotted lines of Fig. 47, a whole strain on the left, and a whole strain on the right. This exercise should be done with great deliberation, charging only on every second accented beat.



Fig. 46.

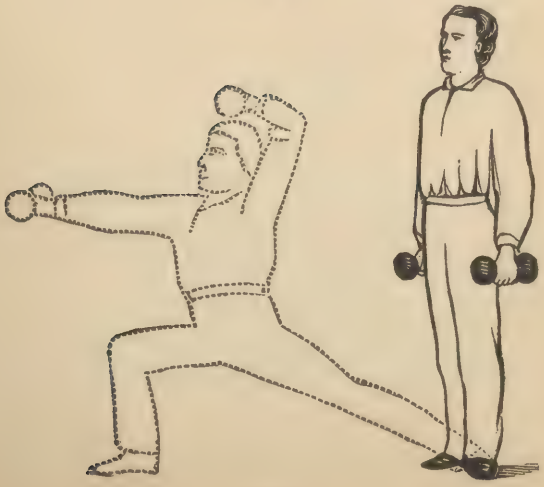


Fig. 47.

No. 7. — Standing in the position seen in the upright figure (Fig. 48), stamp three times, departing in each step farther and farther from the perpendicular until on the third stamp you reach the position seen in the oblique figure of Fig. 48. This movement is done only on the accented beats.

Same on the other side.



Fig. 48.

No. 8. — Charge at a single step into the position seen in the oblique figure, (Fig. 48,) and rising, charge at once on the other side. Thus alternate through a whole strain.

No. 9. — Hands on the chest, thrust the left hand directly forward, and swing it in the horizontal plane

as far behind as possible, a half strain. Bring it then to the chest. Thrust the right hand out in front, and repeat the movement to the end of the strain. (Fig. 49.)

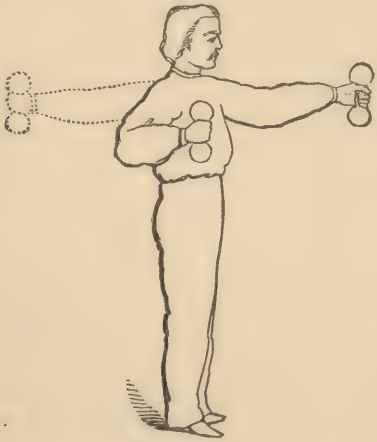


Fig. 49.

No. 10. — Stamp with the right foot, then with the left; then, charging out with the left foot sideways, remain there and swing the arm, as seen in Fig. 50, half a strain, on each side.

The music may now change to the *Anvil chorus*.

No. 11. — The pupil takes the position seen in Fig. 51, and bringing the arm which is over the shoulder through the course of the dotted line above, strikes with its dumb-bell the bell held in the other hand, driving it swiftly through the course of the dotted line below. The arms have now

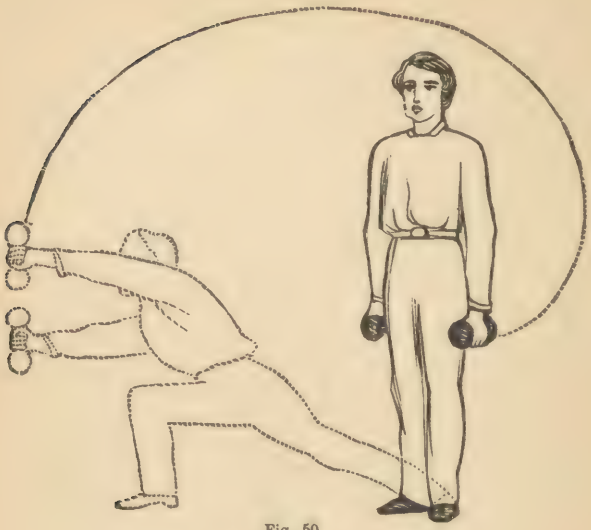


Fig. 50.

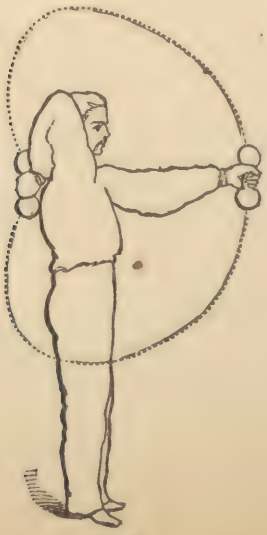


Fig. 51.

changed their position. The upper dumb-bell again strikes the dumb-bell in front, driving it in its turn to the position over the shoulder. Having struck the dumb-bell in front with the one over the shoulder once with each bell, on the third movement



Fig. 52.

hit the dumb-bell in front from below, the striking bell passing through the line represented by the dots below. Of course the dumb-bell in front, being thus struck, will reach the shoulder, passing through the upper dotted line. The other bell the same.*

* This stroke from the back of the shoulder was devised by one of the graduates of our Normal School, Mr. R——, of Philadelphia.

On the fifth beat step diagonally forward with the left foot, and swing the dumb-bells with a large sweep up at the sides, hitting them together. (Fig. 52.) Execute this movement twice on each side, thus filling the strain of music.

No. 11. — Now repeat the exercise shown in Fig. 51 during the first half of the strain of music, and fill the last half of the strain by the movement seen in Fig. 53.



Fig. 53.

No. 12. — Repeat the exercise in Fig. 51 four beats, and conclude the strain of music by the movements shown in Figs. 54 and 55. The move-



Fig. 54.



Fig. 55.

ments shown in Figs. 54 and 55 should be alternated through four beats to finish the strain.

No. 13. — Repeat again the exercise seen in Fig. 51 through half the strain, and close it by the exercise shown in Fig. 50. This last movement occupies two beats on one side and two beats on the other.

THE RINGS.

During 1860 I thought much of an order of exercises involving a new philosophy, — exercises of a composite nature.

I had observed that all movements and games in which two persons touched or assisted each other were especially interesting. The great interest of dancing turns upon this personal contact. I frequently asked myself, "Why cannot the charm of this personal magnetism be enjoyed in gymnastics?" This thought led to the practice of joining the pupils in couples. They joined, for example, their right hands, and, spreading the feet to make a firm base, thrust the hands alternately backward and forward, then the left hands, and then the two alternately and simultaneously. These and various other movements with the joined hands were devised and used for many weeks. But the hands, soon becoming moist from perspiration, were apt to slip, and if a lady and gentleman were exercising together, his efforts to prevent the slipping would frequently hurt her hand. Besides, there

was little freedom of motion, because of the danger of losing the hold.

It occurred to me one day to join the hands by some artificial means. At first we procured simple handles, such as are seen upon an old-fashioned wash-tub, and joining two of them by a wire link, placed them in the hands of the pupils. We named them "double-handles," and used them for several weeks. But it was observed that when one person was pulling and the other pushing, if the pushing movement were the stronger, the pusher's handle would frequently double upon its mate and bruise the knuckles. Besides, there was no firmness or certainty in the side motions.

For some time we could think of no means of correcting this evil, and at length made the mistake of abandoning the near connection of the pupils and placing between the handles a rope two feet long, giving up the idea of pushing and side movements for the advantages of free pulling. It was indeed a capital way of exercising the flexor muscles.* We were not unmindful of the loss to the extensor muscles. We had hoped in these composite exercises to secure to the extensor muscles the great advantage of pushing in all possible directions, — the great desideratum in physical training. The in-

* I have even now an immense quantity of these handled ropes in store.

genious reader will be astonished that the ring was not thought of at first. It seems to me that another person would have thought of it at once.

It was six months after we began to experiment in the new order of exercises before the thought of the ring occurred to us, and even then only by the merest accident. At first a hard rubber ring was suggested. We visited a rubber store and found such an article could be made, but learned the cost would be a dollar and a quarter each. We knew this piece of apparatus should be used in immense numbers if it proved a success, and that such a price would prevent its general introduction. I mentioned the subject to my friend Tucker, the turner, who at once said, "Why not let me make some of wood?" I was so little acquainted with the mysteries of turning I did not know that rings could be turned from wood. My friend went to his shop, and within an hour returned with a ring. He asked, "How many shall I turn?" In the first enthusiasm I replied, "You may make a million to begin with." He concluded, however, to begin with a hundred. I clearly foresaw that the Gymnastic Ring would become a universal and most popular means of physical training. For six months the rings were made of one piece of wood, but they frequently broke, and the *triple* ring, as it is now named, was devised. This has given, I be-

lieve, perfect satisfaction. It has now been extensively used for more than six years. Many hundred thousands of them are in active service to-day.

This Gymnastic Ring is the most important contribution which I have been permitted to make to the cause of physical training. So important do I deem it, so large a part am I confident it is to play in the physical training of the future, that I ask no greater honor in the history of American education than an association of my name with the Gymnastic Ring.

During no period of my labors in the gymnastic field, have I been so deeply interested as during the year or two in which the exercises of the ring were being invented and arranged.

These exercises may justly claim advantages over all other possible means of *general* muscular training. The dumb-bell is not to be compared with it. When one is exercising alone, his own body being the centre and fulcrum of motion, the width and scope of the movements are trifling compared with those in which the hands encounter the varied resistance met in the ring exercises. In this case, not the resistance of a dead club, dumb-bell, or bar, which never changes, but the resistance of a living man, constantly varied, thereby securing an almost infinite variety of wide, free, and vigorous movements. Take, for example, a single thrust forward

with one hand. If the gymnast perform this movement alone with his naked hand, or with a dumb-bell, the variety and force of motion will be limited; besides, the action of the extensor muscles, which so urgently demand our attention, is slight. But suppose that in the hand is a ring, and on the other side of the ring is the hand of another living man, who, when your hand is thrust forward resists that thrust. His resistance is never twice alike, it constantly changes both as to the amount and the line or direction. Whoever will reflect upon this for one moment will see that the thrust forward with the ring is much more valuable than a thrust with the naked hand, or with a dumb-bell. What is true in regard to this simple movement is true of every other possible movement, and it may be justly added, that the advantage in the case of the ring is still many times greater in all sideways and oblique movements. From our series of exercises with the rings it is not difficult to select a single one which involves greater and more profitable variety of muscular training than is found in any ten exercises with the dumb-bell or wand.

I must not forget to mention in this connection, that the two Hamblin brothers, Lawrence and Edward, who were with me for a long time as assistant teachers, made important contributions to the ring exercises. I offered a reward for every

new movement that should be adopted. When a graceful and physiological movement was devised I took occasion to mention it publicly with all honor to the inventor. This elicited the greatest enthusiasm in the corps, which, with my own intense and almost sleepless interest, resulted, in the course of a year and a half, in the development of the present system of exercises. Very few changes have since been made. I presume that during the time we were devising these exercises three hundred movements were brought forward and rejected. The present series — that which will be given in the following cuts and descriptions — comprises those which in my judgment are best calculated to develop harmoniously the average American. The exercises are adapted to the training of those muscles which in the average round-shouldered American youth most need development.

THE RING EXERCISES.

No. 1. — Standing in the position represented in Fig. 1, and placing the right toe against the right toe of your partner, and the left foot at right angles with the right foot, as seen in the figure, pull hard and twist the right arm from right to left, keeping time to the music. Be careful in this, as in all

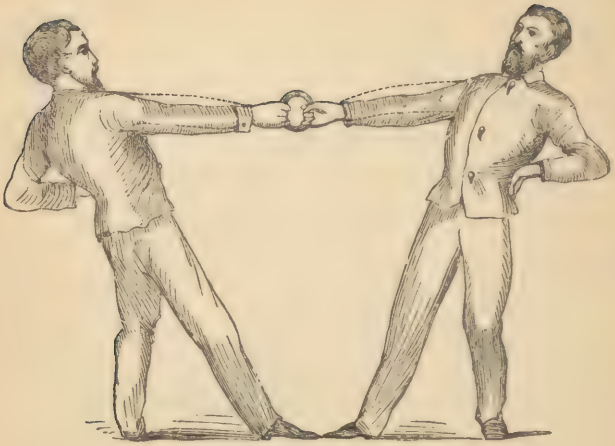


Fig. 1.

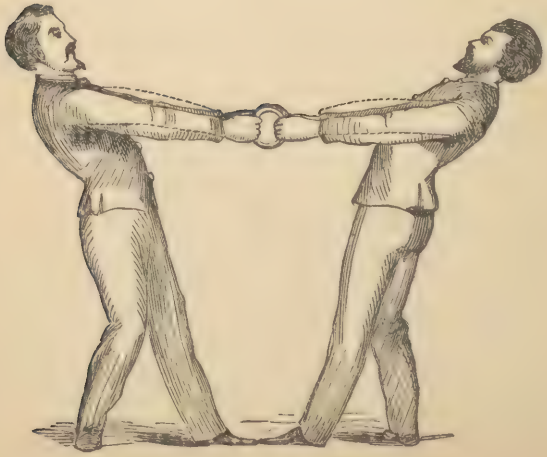


Fig 2

other exercises with the rings, to draw the shoulders well back and keep the head erect.

No. 2. — Same as the last, but using the left hand with the left foot forward.

No. 3. — Join both hands and place the right toe against your partner's right, as in Fig. 1, being sure to keep the foot behind at right angles with the one in front. Twist the rings through the strain.

No. 4. — Same as the last, except with the left foot forward. (Fig. 2.)

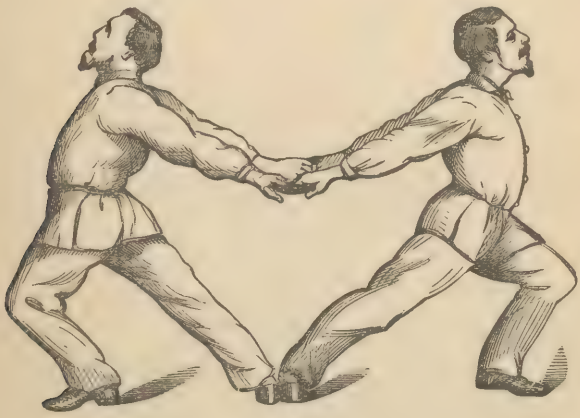


Fig. 3.

No. 5. — Without letting go the rings, turn back to back, place the outside of the left foot against the same of your partner, and turn the rings through the strain. Keep time in all the changes.

No. 6. — Same as the last, but with the right foot behind. (Fig. 3.)

No. 7. — Turn face to face, raise the hands as high as you can over the head, and, standing about two feet apart, bring the rings down to the floor without bending the knees, as represented in Fig. 4. In the performance of this you must not bend

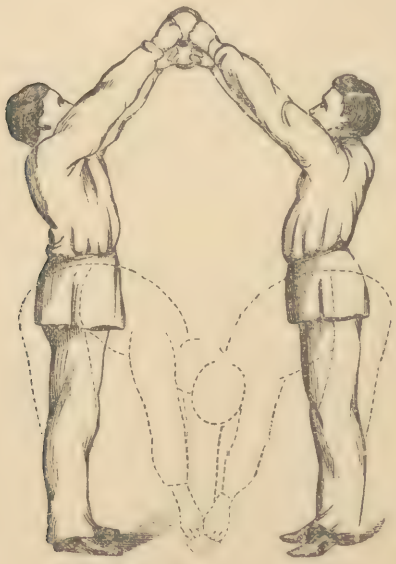


Fig. 4.

the elbows, which you can avoid by carrying the rings outward at each side, eight beats.

No. 8. — Standing as in the last exercise, place the rings in the position seen in Fig. 5. As the arms on one side rise the arms on the other fall,

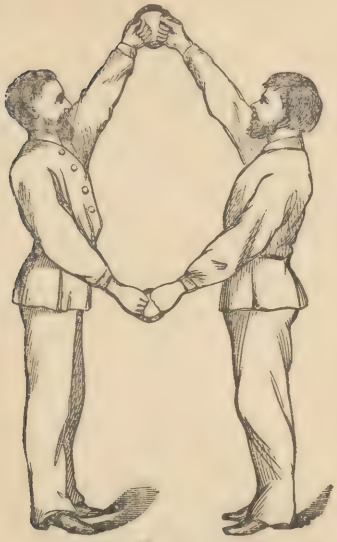


Fig. 5.

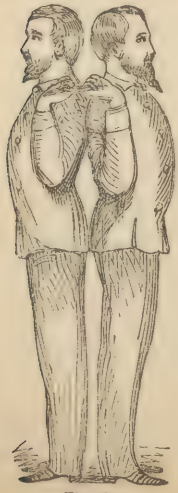


Fig. 6.

keeping time to the music through four beats. The last four beats the two rings are carried up and down simultaneously.

No. 9. — Back to back, as seen in Fig. 6, thrust the rings up with great force as in Fig. 7, then back to the shoulders, and then thrust out at the sides, as in Fig. 8, then downward as in Fig. 9. Repeat to the end of the strain.

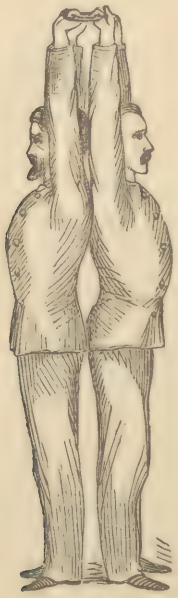


Fig. 7.

No. 10. — The last three movements consecutively, through a strain of music.



Fig. 8.



Fig. 9.

No. 11. — Take the position seen in Fig. 10, the inside of your right foot to the inside of your partner's right, draw your left hand as far back past your left side as possible, drawing your partner's right hand after it, and so continue to alternate. Do this strongly. Push your hand past your partner's side as far as possible, at the same time pulling his as far past yours as possible.

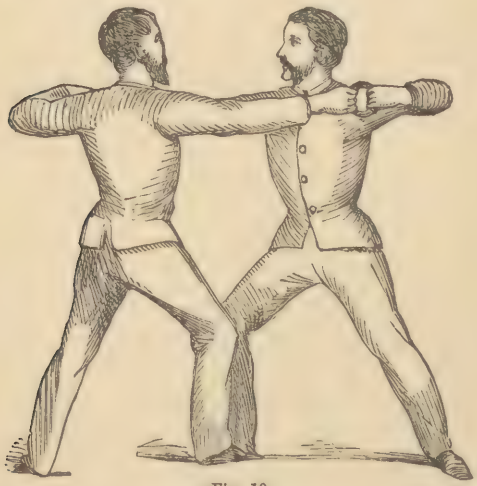


Fig. 10.

No. 12. — Same as the last, except the left foot forward. Be sure in this as in all others that your feet are at right angles.

No. 13. — Same as the last, except the feet move with the hands. When the right hand is thrust forward the right foot goes also, and with the left hand

the left foot. The value of this exercise is determined by the length of the step.

No. 14. — Back to back, touching each other's heels, as seen in Fig. 11, each takes a long step diagonally forward with the right foot as represented by the dotted lines of the figure, then the left and so on to the end of the strain.

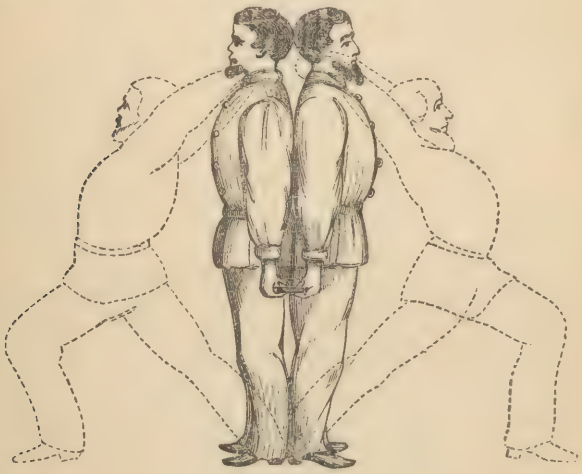


Fig. 11.

No. 15. — Both of the performers stand in the position of the upright one in Fig. 12. One sinks down as seen in the other figure of Fig. 12, and, rising on the unaccented beat to the upright position, he is followed by his partner in the same sinking movement. Thus they alternate through a strain of music. Same with the other foot forward.

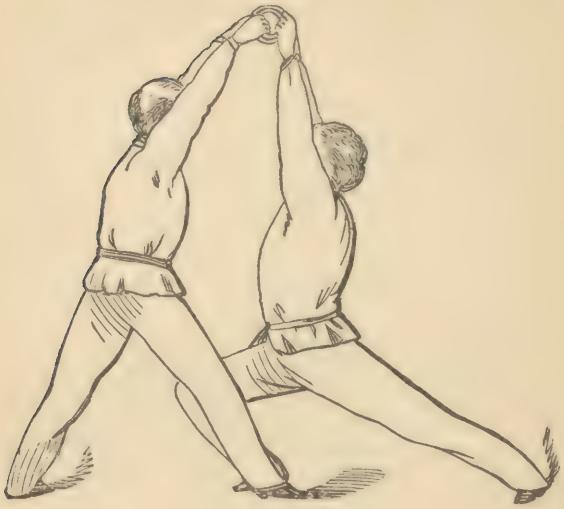


Fig. 12.

No. 16. — Same as the last, but with a change of feet.

No. 17. — Back to back, charge up the hall as seen in Fig. 13, at the same time raising the hands on the same side as high as you can. Then returning to the upright position, hands by the sides, charge down the hall in the same manner. This should be done through half the strain. Continue to charge sideways as before, only in opposite directions, as represented in Fig. 14, to the end of the strain.

No. 18. — Turn face to face, and, standing very near your partner, charge up the hall as in the last

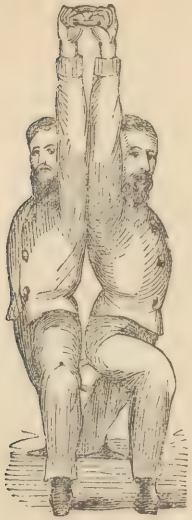


Fig. 13.



Fig. 14.

exercise, and as seen in Fig. 15, then down the hall through half a strain, then move as seen in Fig. 16 to the end of the strain.



Fig. 15.

No. 19. — Turn back to back, and, standing eighteen inches apart, swing up the arms alternately, as seen in Fig. 17, through half the strain; then simultaneously to the end of the strain.

No. 20. — Face to face, standing the length of the arms apart, as seen in Fig. 18, charge with the right foot to the outside of your partner's right foot through the strain. In this exercise the hands are to go upward when the foot charges forward, without bending the arms.



Fig. 16.



Fig. 17.

No. 21. — Then repeat, except you join the left hands and charge with your left foot.

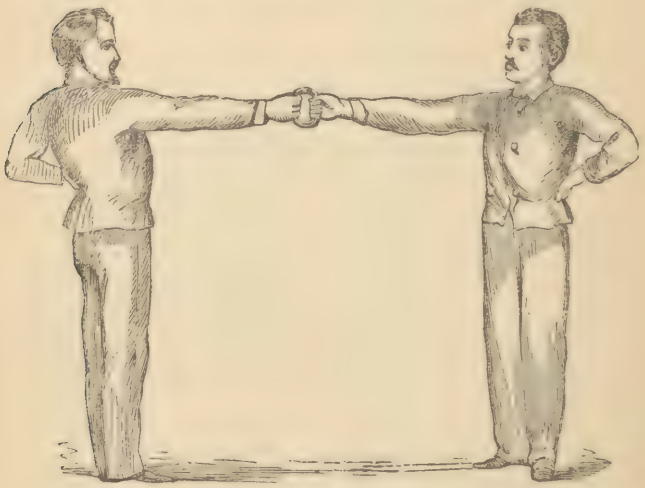


Fig. 18.

No. 22. — Join both hands and stand in the position seen in Fig. 19. Now charge diagonally forward with the right foot, then the left, and so continue to alternate to the end of the strain. Let the step be a long one, without bending the leg which is left behind. In this exercise as in the previous one, the arms go upward, and the elbows must not be bent.

No. 23. — Stand back to back, place the outside of your left foot against the outside of your partner's left foot, and then charge forward into the

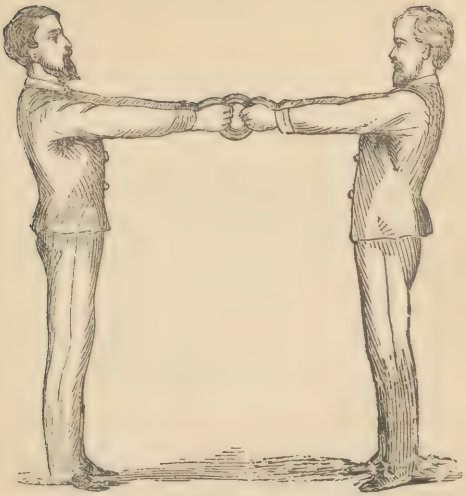


Fig. 19.

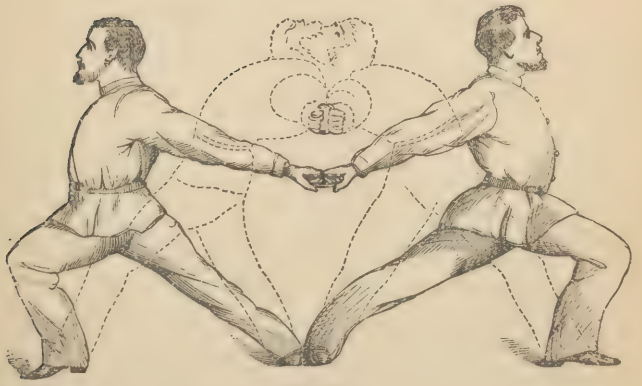


Fig. 20.

position seen in the black lines of Fig. 20. On the unaccented beats sway backward and touch the

shoulders, or what is perhaps better, do not quite touch them. Let this exercise fill one strain of music.

No. 24. — Change your feet and repeat through an entire strain.

No. 25. — Stand face to face, close together, arms down by the sides, swing up the arms on one side vigorously to the perpendicular over your heads, then the arms on the other side, and so continue to alternate through a strain of music. This should be done without bending the elbows, and when the arms are swung up on one side, the heads of the two pupils should be so near together that their faces can be distinctly seen by a person standing on that side.

No. 26. — Turn back to back, arms hanging by the sides, carry the arms on one side over the head and down on the other side of your bodies as far as they can reach, on the accented beat. Now bring them back on the unaccented beat. Then carry the arms of the other side over on the accented beat and bring them back on the unaccented beat, and so continue to alternate four beats. Now, during the remaining four beats of the measure, carry all the four hands in a knot over the head backward and forward, and let the last movement be only on the accented beat. (Fig. 21.)

No. 27. — Closing the last exercise back to back,

begin the next one by turning face to face. Now turn again back to back, then face to face, now back to back, and so continue through a strain.

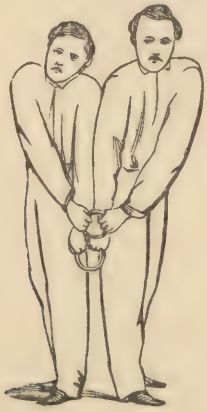


Fig. 21.

No. 28. — Stand back to back, the shoulders touching each other. Draw your partner's left arm directly under your right arm by thrusting your arm straight forward, at the same moment he draws your left arm under his right arm. Now, on the next beat, draw your partner's right arm under your left, he does the same, and so you alternate through a strain of music. (Fig. 22.)

No. 29. — Face to face, join the right hands, the distance apart should be the length of two arms, push them exactly sideways in a horizontal plane as far as you can reach on the accented beat. Now

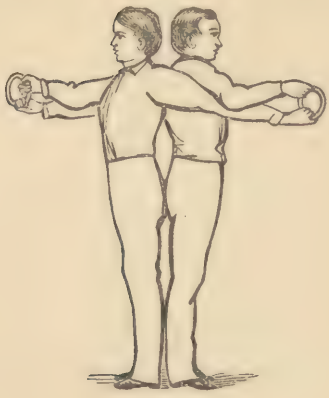


Fig. 22.

bring them to a straight line between you on the unaccented beat, then on the next accented beat push in the other direction, and so continue through a strain. (Fig. 23.)

No. 30. — Same, joining the other hands.

No. 31. — Now join again the right hands, same distance apart, and push directly upward, down to the horizontal, then down near the floor, up to the horizontal, again upward as far as you can push through a strain of music. (Fig. 24.)

No. 32. — Change the hands and repeat the same with the left hand.

No. 33. — Back to back, outside of your left foot against the outside of your partner's left foot. Charge the right foot forward, hold the hands as high over the head as possible, and in this posi-

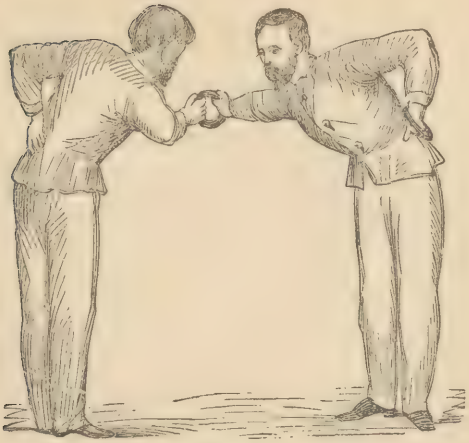


Fig. 23.



Fig. 24.

tion sway forward on the accented beat, and make as large an arch as possible. Eight beats. (Fig. 25.)



Fig. 25.

No. 34. — Now another strain of music for the exercise, with the right foot behind.

No. 35. — Join the right hands, standing as far apart as the length of the two arms, with your face towards one end of the hall and your partner's towards the other. Now, step straight forward with the left foot through four beats. Then reverse without loss of time and repeat with the other hands. (Fig. 26.)

No. 36. — Back to back, standing about a foot and a half apart, push with the four hands up-

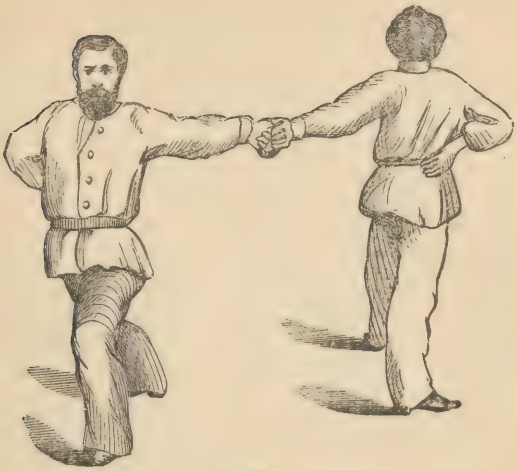


Fig. 26.



Fig. 27.

ward as far as possible. Now draw them down between your heads forcibly through one strain of music. (Fig. 27.)

No. 37. — Face to face, left foot forward inside your partner's left foot. You push your partner and he pushes you in alternation as represented in Fig. 28, through one strain of music.

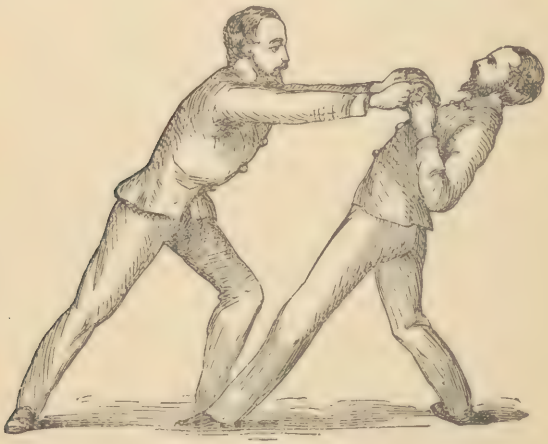


Fig. 28.

No. 38. — Repeat with a change of feet.

No. 39. — Face to face, standing two feet apart, step with your right foot forward on your partner's right side, who does the same with his right foot on your right side, with the arms quite perpendicular. Now step with your left foot across on your partner's left side, who steps with his left foot across on your left side. Alternate through one strain of music. (Fig. 29.)



Fig. 20.

THE WAND.

If you have studied a picture of the muscles of the shoulders and chest, you have observed a curious disposition in their arrangement. They diverge from the shoulder joint in all directions like a fan.

Control over the vital organs within turns upon the muscles without, and the exercise of these chest muscles turns upon the play at the shoulder joint. Therefore, a great point in training the muscles of the upper half of the body is to secure freedom of motion at the shoulder joint. Everything depends upon this.

The Wand is an admirable means to this end. With it we may fix the hands four feet apart, and, thus fixed, we may reach by a great variety of movements a wonderful freedom in the shoulder joint.

Professor Langdon, an English gentleman now residing in New York, devised a system of beautiful and valuable exercises with the wand. I witnessed some of his training in a young ladies' seminary with lively interest. I think, however, his exercises were not physiologically discriminating in reference to the muscles most needing at-

tention. Our drooping shoulders were not sufficiently recognized, but the great value of the wand as a means of general muscle training, and more especially as a means of securing a free movement in the shoulder joint, was abundantly illustrated. Prof. Langdon's exercises were not adapted to music. I think he made no attempt in this direction.

The sixty-four movements with the wand devised and taught by myself are all adapted to music, and in great part aimed at those muscles whose weakness permits drooping shoulders.

EXERCISES WITH THE WANDS.

No. 1. — At a signal from the piano (a single touch of the keys), the wand is thrust out in front with straight arms in a horizontal position. Thus held in full view of the pupil, he divides it with his hands into three equal parts. At another signal the wand is brought back to rest against the person, the arms hanging.

No. 2. — From the position represented in Fig. 1, carry the wand to the highest stretch upward, and bring it back to the position seen in Fig. 1 four times.

No. 3. — The wand held aloft over the head should be brought down to the floor without bending the elbows or knees, four times. This fills

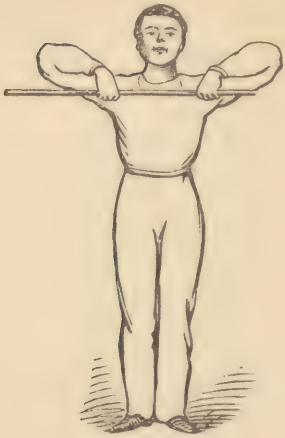


Fig. 1.



Fig. 2.

half the strain. The other half is filled by drawing the wand from the highest position over the head to the position seen in Fig. 2, four times.

No. 4. — From the highest position over the head, draw the wand to that seen in Fig. 2, and to the chin in front, alternately eight beats.



Fig. 3.

No. 5. — Ending the last exercise with the wand held aloft, begin No. 5 by slipping the left hand to its end of the wand. On the next beat slip the right hand to its end of the wand, so that the wand will then be held in the position seen in Fig. 3. From this position carry it down to the position seen in Fig. 4 to the end of the strain.

No. 6. — Execute the last exercise in alternation with the corresponding one on the front of the body. Eight beats.

No. 7. — Beginning with the position seen in Fig.



Fig. 4.

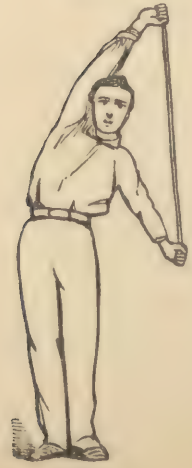


Fig. 5.

3, carry the wand from side to side eight times. (Fig. 5.)

No. 8. — Bring the end of the wand down to the floor by the feet, the wand being seized by the left hand at its upper end. Keeping the wand perpendicular, carry it out at arm's length diagonally to the left in front, and strike the floor. Now step



Fig. 6.



Fig. 7.

as in Fig. 6 to the end of the strain, being careful not to bend the leg left behind. Repeat precisely the same exercise on the other side.

No. 9. — Bring the wand to the perpendicular near your feet, strike the floor, and, reaching out as far as you can, keep the wand perpendicular, and strike on the floor as in Fig. 6, but at least a foot farther. (Fig. 7.) Remain during the residue of the strain in this position without moving the feet from the floor, and rise and sink, making as much motion with the hips backward and forward as is possible without disturbing the upright position of the wand. The arm with which the wand is held should be kept perfectly straight, though I observe the artist has represented it bent. Repeat the same movement with the other leg and arm.

No. 10. —At the end of the last exercise rise to the perpendicular with the wand in the position seen in Fig. 8. Now thrust the hands directly forward to the full length of the arms, and draw them back to the position seen in the figure, through the strain. During this exercise keep the wand as nearly perpendicular as possible.

No. 11. — From the last exercise pass at once to the position represented in Fig. 9. In this exercise you simply change the wand from the position seen in Fig. 9 to the same position on the other side of the body, and in passing from one



Fig. 8.



Fig. 9.

side to the other you raise the arms straight to the horizontal position in front.

No. 12. — At the conclusion of the strain of music in the last exercise, bring the hands to the chest as in Fig. 8, and from this position thrust the wand into the position seen in Fig. 10, and alternate between one side and the other through a strain.



Fig. 10.

No. 13. — Charge diagonally forward with the left and right foot alternately, with the wand in the position seen in Fig. 11.

No. 14. — Step diagonally backward on the left and right side alternately, as in Fig. 12. Eight beats.



Fig. 11.



Fig. 12

No. 15. — Take the position seen in Fig. 13 and reverse the ends of wand through the strain, moving only on the accented beats.



Fig. 13.

No. 16. — At the end of the last strain turn suddenly to the left, and, holding the wand as shown in Fig. 14, move it on the accented beats into the position seen in the dotted lines of Fig. 14. One strain on the left, one strain on the right, and one strain alternately.

No. 17. — Standing upright, with one end of the wand resting on the floor in front of the feet, strike the wand there, then strike the wand at arm's length in front, then, allowing the right foot to remain at rest, step forward with the left foot

to where the wand rests on the floor, then back to the first position, four beats, and four beats with the right hand and foot.

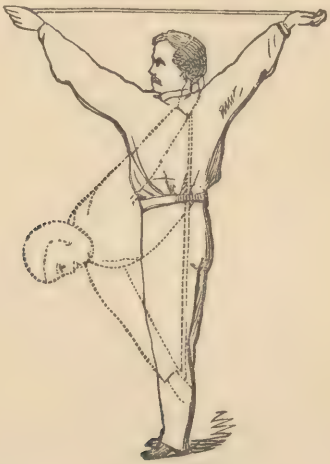


Fig. 14.

No. 18. — Keeping the same position as in the last, step backward as far as the left foot can reach, four beats, then four beats with the right foot. Left foot and hand go together. Right foot and hand.

No. 19. — Still maintaining the same position, carry the left foot forward to where the wand rests upon the floor, and then backward as far as you can reach with it, making a very long stride with one foot, the other foot remaining at rest, four beats. Same with the other foot and hand four beats.

No. 20. — Now put both hands upon the top end of the wand and make a long stride, with the two feet passing backward and forward alternately. Fig. 15.



Fig. 15.

No. 21. — From the last exercise come at once into the position seen in Fig. 16. Change the wand from the position seen in the figure to a similar position on the other shoulder, of course reversing the hands, so that the left hand will be up on one side, and the right hand up on the other. In other words, the right arm is down when the wand is on the right shoulder, and the left arm down when the wand is on the left shoulder.

This change, which must be accomplished without bending the elbows, and which is a most beautiful and profitable exercise if well done, goes through four beats. Immediately you change to exactly the same position on the back of the shoulders, and re-

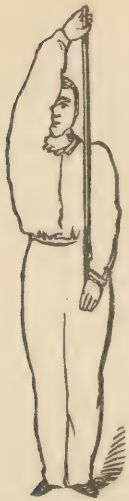


Fig. 16.

repeat precisely the same movement, during four beats. There is not a better exercise in the whole wand series than this one.

No. 22. — Beginning with the wand exactly as in Fig. 16, on the left side of the chest in front, change the wand to the right shoulder as before; from that carry it to the back side of the right shoulder, and now to the back side of the left shoulder, and now to the front side of the left shoulder, and then pass right back again from this movement till you arrive again at the position seen in Fig. 16.

No. 23. — From the position seen in Fig. 16,

carry the wand to the back side of the right shoulder, and alternate between that and the position seen in Fig. 16, during half a strain. The other half of the strain, alternate between the front side of the right shoulder and the back side of the left shoulder. These last three exercises should be carefully studied until they can be well done, for they are very excellent in their influence upon the chest.

No. 24. — Turn the body to the left, put the wand out at arm's length in front, being sure that the wand itself is perpendicular, and, using the right hand, step exactly sideways with the right foot, simultaneously with the placing of the wand upon the floor. Now step directly backward as in



Fig. 17.

Fig. 17, then across behind the other foot, Fig. 18, then in front, Fig. 19. Now repeat the same with the other foot and arm.

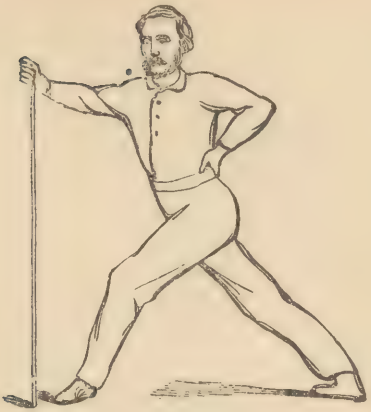


Fig. 18.

No. 25. — Alternate between these two, changing the hand and foot every movement.



Fig 19.

No. 26. — At the close of the last exercise come

at once into the position seen in Fig. 20. Reverse the ends of the wand through half a strain, and finish the strain by doing precisely the same thing behind the spine.



Fig. 20.

No. 27. — Still holding the wand behind the back, charge alternately on the left and right side into the position shown in Fig. 21, through one strain.

No. 28. — At the close of the last strain take the position seen in the continuous lines of Fig. 22. Alternate between this position and the corresponding one on the other side shown in the dotted line, and in passing from one to the other



Fig. 21.

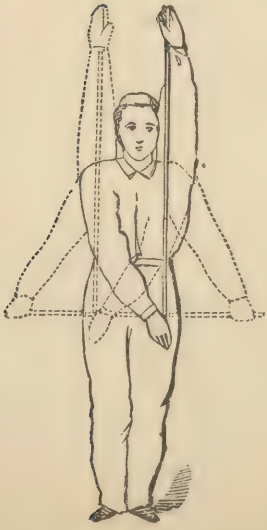


Fig. 22

let the wand fall down on the unaccented beat in front in a transverse position, as seen in the dotted line.

The last exercise in the wand series is found in the charge seen in Fig. 23, alternated from one side to the other through a strain.



Fig 23.

THE INDIAN CLUB.

THE more difficult club exercises are not practicable in class drill. For this reason I introduce only a few of the more simple, such as can be used with music. The size of the club is given under the head of Gymnastic Apparatus.

The club exercises differ widely from all the other exercises in the New Gymnastics. They cultivate patience and endurance, and operate most happily upon the longitudinal muscles of the back of the neck and shoulders, thus tending to correct the habit of stooping. Besides, nearly all the movements in the New Gymnastics are quick. This feature is very valuable, and indeed constitutes the great claim of the new system to favor, but slow movements have their uses. These will be found in the club exercises; and as they are exactly aimed at the muscles which most need culture in the average American, it is believed they will be especially acceptable and popular among the earnest students of physical culture.

The teacher will find it very difficult at first to

secure the straight line in the arm and club. They should in all the exercises, with the two or three obvious exceptions, be made as straight as possible, and kept so through every movement. The value of this series turns very much upon the observance of this rule. In order to make the arm and club quite straight, it will be seen that the wrist must be slightly bent. As in the other exercises, when a horizontal in front is directed, let the position be precisely horizontal, and the arm and club so held that were both up at the same time they would be exactly parallel to each other.

Accuracy is of the first importance, but difficult to secure in exercises with the club.

No gymnasium is complete without the clubs. They are indispensable to harmonious training.

CLUB EXERCISES.

FIRST SERIES.

No. 1. — Clubs hang at the sides; grasp firmly; carry the left club up to the horizontal in front. (The left arm and club are represented in the horizontal position in front in Fig. 1.) The left arm having been carried up to this position and back to the side once, the right arm performs the same. Then both arms simultaneously twice. This com-

pletes a strain of music as the motions are made only on the accented beats.

No. 2. — Bring both arms into the horizontal position in front, which should be done on the last



Fig. 1.

unaccented beat of the last strain. Starting with them in this position, carry the left arm from the horizontal in front to the perpendicular over the shoulder, and back again to the horizontal, once. Right arm the same. Simultaneously twice. This, like No. 1, fills an entire strain of music.

No. 3. — On the last unaccented beat of No. 2 let the clubs fall into the hanging position by the sides. Now bring the left from the hanging at the side to the perpendicular over the shoulder, and back

again to the hanging at the side once. Right the same. Simultaneously twice.

No. 4. — Beginning with the hanging at the side, carry the left arm to the horizontal at the side, (the right arm in Fig. 1 is represented in the horizontal at the side position,) and back once. The right arm once. Both arms simultaneously twice.

No. 5. — On the last unaccented beat of the strain of music in No. 4, carry both clubs into the horizontal at the side position. Now raise the left club and arm into the perpendicular over the shoulder, and return to the horizontal once. Right arm the same. Both arms simultaneously twice.

No. 6. — On the last unaccented beat of the last exercise, drop the clubs to the hanging position by the legs. Now carry the left through the side, sweep to the perpendicular over the shoulder, and return to the hanging position at the side. Right the same. Simultaneously twice.

No. 7. — Beginning with the clubs hanging by the sides, raise the left to the horizontal in front, and at the same moment the right to the horizontal at the side. Now bring them down to the sides. On the third beat carry the left up to the horizontal at the side, and the right to the horizontal in front. Bring back to the sides. Repeat these two movements, which will finish the strain.

No. 8. — On the last unaccented beat of the last

exercise bring the clubs exactly into the position represented in Fig. 1. Beginning in this position carry the clubs both to the perpendicular over the shoulders. Now bring them down to the horizontal again, but let the left one fall into the position in which the right is seen in Fig. 1, and the right into the position which is shown in the left in Fig. 1. On the next beat raise the clubs into the perpendicular over the shoulders; on the next beat into the position seen in Fig. 1; on the next beat perpendicular over the shoulders; on the next beat, left to the horizontal at the side, and right to the horizontal in front.

It is well to use only the exercises in the first series during the first month.

SECOND SERIES.

No. 1. — Holding the two clubs in the position seen in Fig. 2, on the first beat raise the left arm into the position in which the right is shown in the figure, — the perpendicular over the shoulder. At the same moment bring the right down to the position in which the left is seen. So continue to alternate through a strain of music.

No. 2. — Holding both clubs in the position seen in the right arm of Fig. 2, to which position the clubs should have been brought on the last unac-

cented beat of the last exercise, bring them both down to the horizontal in front, and on the next beat bear them in the horizontal plane to the horizontal at the side; on the next beat carry them



Fig. 2.

up to the perpendicular over the shoulders; on the next beat to the horizontal in front; on the next beat again to the horizontal at the sides; on the next again to the perpendicular over the shoulders; on the next to the horizontal in front; on the next beat back to the perpendicular over the shoulders.

No. 3. — On the last unaccented beat of the last exercise, bring the clubs into the horizontal position in front. Holding the arms in this position without bending the elbows, bring the left club, by a motion of the wrist, over upon the arm, letting it strike the arm, then on the next accented beat carry it back again to the straight-out horizontal position in front. The right arm the same. Both simultaneously twice.

No. 4. — On the last unaccented beat of the last exercise, carry the arms around to the horizontal at the sides, and, holding the arms inflexibly in that position, by a motion of the wrist bring the left club over upon the arm, letting it strike the arm; then, on the next accented beat, carry it back again to the straight-out horizontal position. Right club the same. Both clubs simultaneously twice.

No. 5. — At the conclusion of this exercise bring the clubs back again to the horizontal in front, and, holding both arms inflexibly in this position, raise both clubs to the perpendicular, all of which must be done on the last unaccented beat of the last exercise. Now on the first beat allow the left club to fall directly outward, at right angles with the arm, down to the horizontal, and bring it back to the perpendicular. Right arm the same. Both arms simultaneously twice.

No. 6. — Holding the arms horizontal in front, clubs perpendicular, allow the left club to fall down to the horizontal, at right angles with its arm and toward the other hand. Carry it back again to the perpendicular. Right arm the same. Both arms simultaneously twice.

No. 7. — On the last unaccented beat of the last exercise, bring the arms round to the horizontal at



Fig. 3.

the side, the clubs being held in the perpendicular attitude. Fig. 3. Now let the left club fall down into the hanging-behind position. Keep the arms exactly horizontal, and bring the club back again

to the position in Fig. 3. Right arm the same. Both arms simultaneously twice. Fig. 4.



Fig. 4.

No. 8. — Holding the arms horizontal at the side, with the clubs perpendicular, repeat the last exercise, except the clubs fall down in front instead of behind.

THIRD SERIES.

No. 1. — Holding the clubs in the position seen in Fig. 5, swing them up to the perpendicular over the shoulders, and with a grand sweep down upon the back, and on the second beat back again into the position seen in the figure. Repeat through a strain.

No. 2. — Holding the clubs on the chest *à la* musket, thrust them into the position seen in Fig. 6, and hold them during one beat; swing them through



Fig. 5.

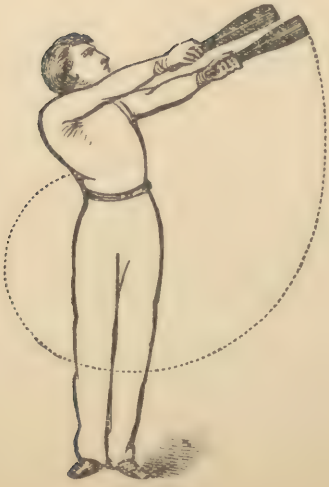


Fig. 6.

the course represented by the dotted line, and around the back to the front of the chest on the second beat; on the third beat thrust out on the other side and make the same movement. So continue during a strain.

No. 3. — Hold the clubs in the position seen in



Fig. 7.



Fig. 8.

Fig. 7, and reverse their places through a strain. Let the movement be through the perpendicular over the shoulder.

No. 4. — Stand erect, arms and clubs horizontal and parallel to each other in front, bend backward and swing the clubs alternately as far back as possible through a strain. Fig. 8.

EXERCISES WITH BEAN-BAGS.

No. 1. — Arrange yourselves in two classes. Classes face each other, six feet apart. Members of one class will each have a bag; the other class

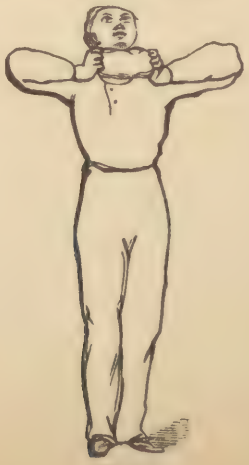


Fig. 1.

will have no bags. Each person will play with the person standing opposite him. Hold the bags under your chins as in Fig. 1. Catch the bags, standing in the position seen in Fig. 2. All ready! *one*,



Fig. 2.

two, *three!* Let each couple throw the bag back and forth ten times. Each in turn, as you finish, hold up your hands and cry out *ten*. The leader announces the names of those who finish first, those who finish second, and those who finish third.

The leader will, when you are accustomed to the work, direct thirty instead of ten passes of the bag.

If any couple allows the bag to fall to the floor, that couple must stand still until the next *one*, *two*, *three*, is counted.

No. 2. — Same as the last, except the bag is thrown and caught with the right hand. The position is seen in Fig. 3.



Fig. 3.

No. 3. — Same as the last, but with the left hand. When the right hand throws, the right hand catches, and so with the left.

No. 4. — The bag is thrown from the back of the shoulders over the head. Fig. 4.

No. 5. — Same as the last, except the bag is thrown with the right hand, as shown in Fig. 5.

No. 6. — Same as the last, except with the left hand.

No. 7. — The bag is to be thrown over the head from the position seen in Fig. 6.



Fig. 4.

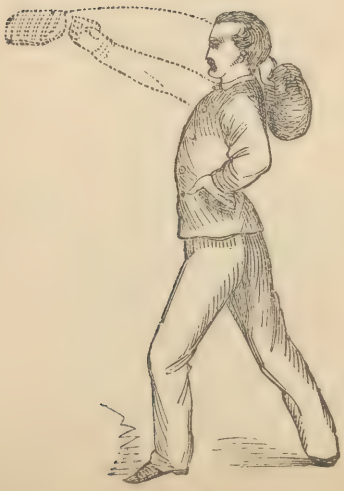


Fig. 5.

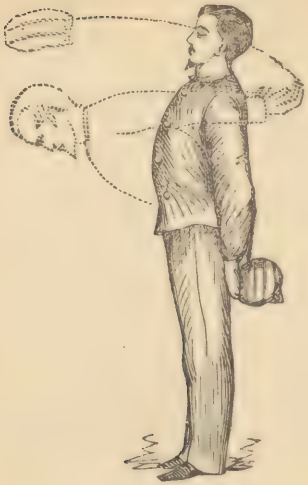


Fig. 6.



Fig. 7.

No. 8. — The bag is to be thrown with the right hand, while the right arm is grasped with the left hand. Fig. 7. Left the same.

No. 9. — The bag is to be thrown from the elbow, Fig. 8, and is to be caught with the hands.



Fig. 8.



Fig. 9.

No. 10. — Same with the other elbow.

No. 11. — The bag is to be thrown from the hands held in front. Fig. 9.



Fig. 10.

No. 12. — Turn your right side toward your partner, and throw from the position in Fig. 10, catching with the right hand. Fix your feet and do not move them.

No. 13. — Same with your left side turned toward your partner. Fig. 11.

No. 14. — Again turn your right side toward your partner and throw from the position seen in Fig. 12.

No. 15. — Same with your left side toward your partner.



Fig. 11.



Fig. 12.

No. 16. — Turn back to back, and throw the bag over your head, as seen in Fig. 13.

To do this well, the leader must manage as fol-



Fig. 13.

lows: — First, he cries out, All ready! then he counts, *one*, *two*, *three!* By the time the word three is spoken, the person who is to catch the bag has bent backward, so that he can see his partner, and the person throwing the bag has likewise bent so he can see his partner, and then throw the bag into his hands. Now the two persons stand upright. The leader begins again by announcing All ready! counting as before. In this way the bags will not fall upon the floor.

No. 17. — Face your partner, and throw from the position represented in Fig. 14, holding the bag on the back of the hand.

No. 18. — Same as the last, except the left hand is employed.

No. 19. — Face your partner, and throw the bag



Fig. 14.

around the back and over the opposite shoulder, as seen in Fig. 15.



Fig. 15.

No. 20. — Same as the last, except you use the other hand.

No. 21. — Each couple uses ten bags; you throw to your partner the whole ten in succession, he catching them if possible upon his arms.* Fig. 16.



Fig. 16.

No. 22. — The two classes stand as represented in Fig. 17. Place ten bags on a chair or box by the first player in each class. The leader gives the word, and the two classes compete in passing the bags over their heads backwards to the foot of the class, when they whirl round and immediately pass them back. The class which first has the entire ten on the chair or box counts one in the game.

No. 23. — Let the two classes face each other

* This exercise may be omitted if you have not a large number of bags.

again, and pass the bags as in the last, except they are carried along in front, and as high as the chest.

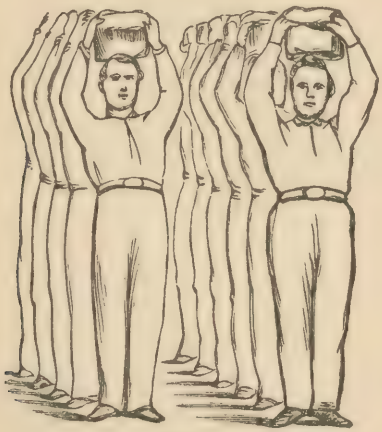


Fig. 17.

No. 24. — Let the bags be all placed at the head of one of the classes. We will call one class No. 1, and the other No. 2. The first player in class No. 1 throws a bag to the first player in class No. 2, who throws the bag to the second player of class No. 1, who throws the bag to the second player of class No. 2, who in turn throws to the third player of class No. 1, and so the bag passes to the foot of the class. But one bag is not allowed to make the trip alone; one follows another in rapid succession. In this game the bags are thrown from the chest with both hands, from the position seen in Fig. 1.

No. 25. — The whole company now divide into trios, each trio playing with three bags, standing as represented in Fig. 18. Each person has a bag

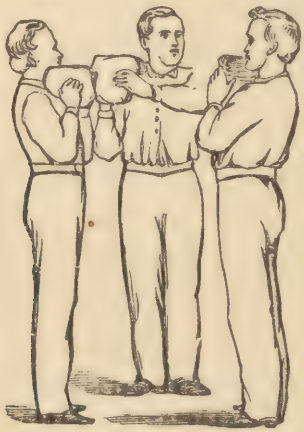


Fig. 18.

and throws it to the player at his right hand, and at the same time catches the bag thrown from the player at his left. The players should stand four feet apart. Each player must look constantly at the one from whom he receives the bags, and never for a moment at the one to whom he throws. If you forget this rule the bags will soon fall to the floor.

No. 26. — Same as the last, except the bags are passed in the opposite way.

No. 27. — The company again divide into couples, and each couple plays with two, three, or four bags.

A throws a bag with his right hand to his partner B, who catches it with the left hand, and immediately changes it to the right, throws it back to A, who catches it with his left, and, changing it to his right, throws it back again to B. Fig. 19. Two,

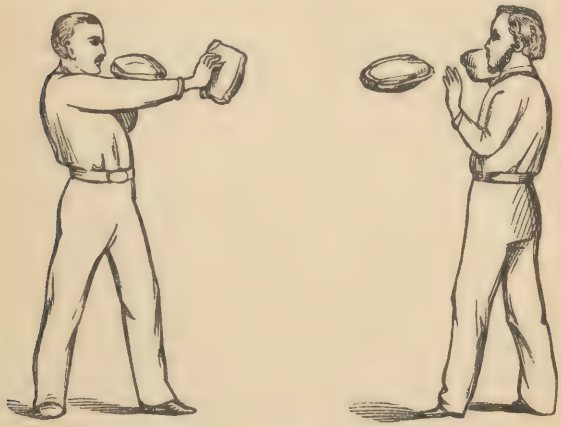


Fig. 19.

three, four, or five bags can be made to perform this circle between the two players. The bag, as in nearly all the other bag exercises, should be *thrown* from the chest, not *tossed* from the lap.

No. 28. — Same as the last, except the bags are thrown with the left, and caught with the right hand.

No. 29. — Now the players stand in two classes again, six feet apart, and the players in each class six feet from each other. Upon the word the first

player in each class seizes a bag and runs to the second player, who carries it to the third, who in turn rushes to the fourth, and so on to the foot of the class. But one bag does not go alone. One at a time the whole six, ten, or twenty are hurried onward. After reaching the foot of the class, instantly, without a signal, they are sent back to the head of the class in the same way. The class which first has its bags on the chair at the head of the class counts one in the game.

It will not be difficult for the ingenious teacher to add indefinitely to the number of these bag exercises; but the games above, in the order in which they are given, have proved most satisfactory to us.

THE BEAN-BAG EXERCISES.

The best material for a bean-bag is strong bed-ticking. For young children it should, before sewing, be eight inches square; for ladies, ten inches; for ladies and gentlemen exercising together, twelve inches. Sew with strong linen or silk thread, doubled, nearly three quarters of an inch from the edge, leaving a small hole at one corner to pour in the beans. Fill the bags three quarters full.

If used daily, once in two weeks they should be emptied and washed, while the beans are rinsed.

Otherwise they will fill your lungs and eyes with dust. Without this thorough cleanliness bean-bag games will prove a nuisance.

These bags have usually been kicked in the corner when not in use, or thrown about at pleasure by the wild pupils. They should never be used except under the immediate eye of the leader. When thus protected and managed, the bag exercises will prove a source of permanent interest, and capital muscle-training. With the bag games *alone*, an earnest teacher can maintain a perpetual, living interest in the gymnastic department of any school.

PERCUSSION.

No. 1. — It is well to conclude your work in the Gymnastic Hall, each lesson, by percussion. The pupils are arranged in couples. At a signal they take the position seen in Fig. 1. The music is rapid. The percussion occupies a whole strain. Instantly at the end of the strain they turn their faces in the opposite direction, and the percussion is repeated upon the other person.



Fig. 1.

No. 2. — Percussion as in Fig. 2. Reverse and repeat.

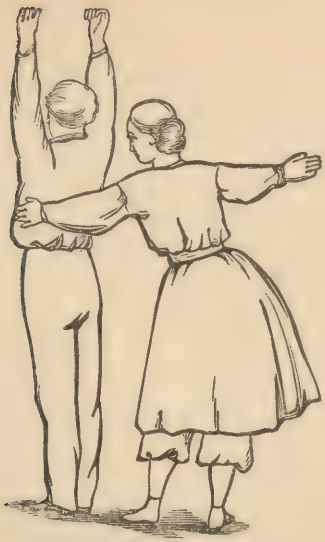


Fig. 2.



Fig. 3.

No. 3. — Percussion as in Fig. 3. Reverse and repeat. And now on the left side, the person percussed bending towards the right.

It is perhaps an improvement, where the two sexes exercise together, to have the last two exercises with faces towards each other.



Fig. 4.

No. 4. — Percussion across the very upper part of the chest. Fig. 4.

No. 5. — Percussion across the small of the back. Fig. 5.

At the next lesson the percussion may be devoted to the arms, or again, at another lesson, to the shoulders above, in front, and behind. And so this per-



Fig. 5.

cussion may be varied from day to day. It is always interesting and always valuable. There are few weaknesses within that are not lessened or cured by percussion. I think it wise to close the exercises of each lesson in this way.

Frequently this slapping may be practised by each pupil upon himself. In this case the blows will be confined in great part to the chest and stomach. Percussion upon and about the pit of the stomach is particularly valuable.

A physician in New York acquired at one time wide fame for the cure of dyspepsia. One condition which he imposed upon every patient was profound secrecy. A grave clergyman with whom I

afterwards became acquainted was treated by this famous dyspepsia doctor. He was taken through one room, down a flight of stairs, through a long hall, up another flight of stairs, turned about, down, up, around, and through, till a small garret was reached, in which he was required to make a solemn promise never to reveal the secret of his treatment. But after the death of the wonderful doctor a number of his patients thought themselves absolved, and published the secret of the cure. Of course most people were astonished to learn that it consisted of *slapping the stomach and abdomen.* Wonderful cures were certainly performed; hundreds were restored, and the doctor made a large fortune.

The soreness of muscle which the first exercises produce is greatly relieved by percussing the sore places. Aching backs, sides, stomachs, and chests are all at once relieved, and in not a few cases the difficulty is entirely removed by this simple treatment.

MODES OF WALKING.

As walking is the most common exercise about the school, I have thought it wise to say something of the various positions in walking. There are many faults, and mischievous ones. Fig. 1 is the worst of the false positions. The pupil *may*, with his hands thus locked behind, draw his shoulders back; but if you will watch a school of one hundred



Fig. 1.

pupils as they march along, with arms thus placed, you will observe that not one of them *does* carry the head and shoulders erect.

Fig. 2 displays another unhealthy position. With the arms thus folded, the respiration is checked, and the shoulders drawn forward. If the reader will



Fig. 2.

stand erect, shoulders and head well drawn back, his arms by his side; then fold them across the chest in front, and carefully observe the change in the position of the shoulders, and in his ability to inflate his lungs, he will clearly see how this attitude cramps the respiratory function. Experimenters have proved that the amount of air which the lungs can take in at a single inspiration is greatly lessened when the arms are thus folded.

Fig. 3 is a good position, opening the chest, and securing a good attitude of the spine.

Fig. 4 is somewhat unseemly, but, in a physiological aspect, the best possible position for the pupil's



Fig. 3.

arms. It would do much, if practised five minutes, two or three times a day, with the head well drawn back, to strengthen the muscles of the spine, and particularly those of the neck, whose weakness permits the head to droop. This drooping of the head is almost universal among Americans, especially among American women. I commend this bit of muscular training to the consideration of teachers.

Carrying the hands in a muff, or clasped in front, at the waist, so common and constant among ladies, is an unphysiological habit. The arms should be carried at the side, and swung. I think taste as well



Fig. 4.

as physiology demands this. That peculiar waddling which women exhibit when moving rapidly is the result of this joining the hands in front. Let any gentleman who would study the effects of this false position of the arms experiment upon himself, and he will be satisfied that the usual and fashionable manner in which ladies carry their arms in walking spoils the gait and contracts the chest. Swinging the arms is a most important part of the exercise of walking. To undertake it with the arms folded, or the hands in a muff, is to spoil it, both in the aspect of beauty and usefulness.

MUTUAL-HELP EXERCISES.

In the development of a series of exercises bearing this title, I have been much interested during the last two or three years.

With the exception of the exercises with the rings, there is in the New System of Gymnastics, as in all other systems heretofore in vogue, a deficiency in the means of training the extensor muscles. For example, in the old-fashioned system of German Gymnastics, the observer has not failed to notice that the exercises were confined almost exclusively to the flexor muscles; so that persons excelling in that system have such a preponderance of flexor strength that they become round-shouldered, while every other part of the person loses its symmetrical proportions. As remarked in another place, one great desideratum in a system of physical training is the introduction of means for the equable development of the two great sets of muscles, — *flexors* and *extensors*. This necessity, which has impressed every thoughtful physical educator, has suggested the Mutual-Help Exercises. In these the flexors enjoy abundant opportunity.

Another advantage is found in the circumstance

that no apparatus is required, and that the exercises may be practised in the narrowest aisles of a crowded school-room. Like the ring exercises, they give equal opportunity for the strongest and weakest in the class. If the pupils are at all well mated, the strongest have all they can wish, and the weakest never have too much.

These exercises I have usually employed with three persons in each group, but think it better to illustrate them here with two persons.

They may be practised to music, the same as other exercises of the New System. We always employ music in their use.

For the sake of distinguishing the pupils, we divide them into the *positive* and the *negative*. The person executing a movement is known as the *positive;* the person resisting his effort, as the *negative*.

When, for example, the positive draws his hand from the hanging at the side position up into his armpit, the negative must always seize the positive by the wrist to resist that movement; and when the hand of the positive reaches the armpit, and he is about to push it back again to the first position, the negative must close his hand over the clenched fist to resist the return. This rule is a general one. When the positive is using the flexors, the negative must seize his wrist and resist; and when the positive uses his extensor muscles, the negative must change his

hand from the wrist to the clenched fist, applying the palm of the hand over the knuckles.

EXERCISES.

No. 1. — Standing in couples, negative two feet behind the right shoulder of positive, on the first beat of the music, negative steps forward close to the right shoulder of positive. On the second beat, negative seizes the right wrist of positive with his right hand, and places his open left hand on top of the shoulder of positive. Positive devotes the third and fourth beat to drawing his fist slowly and steadily into his armpit, negative resisting. At the close of the fourth beat, negative changes his right hand from the wrist to the fist of positive; and during the fifth and sixth beat, positive pushes his hand back to the first position, hanging by the side, negative resisting. (Fig. 1.) On the seventh beat, negative steps back to his original position; and on the eighth beat they face about and are ready for a repetition of the exercise; the parties having changed places, positive having become negative and negative positive. When another strain of music has been occupied with a repetition of the exercise already described, the same exercise is repeated on the left side with both parties. Fig. 1 may assist the pupil in comprehending this exercise.



Fig. 1.

No. 2. — Precisely the same steps are gone through with in No. 2 as in No. 1, except that the hand is drawn from the position over the shoulder (Fig. 2) down to the top of the shoulder. This is repeated with both persons on both sides.

No. 3. — This exercise is a repetition of the preceding two, except that the arm of Mr. Positive is held horizontal at the side. When the arm is bent, the elbow is kept backwards, so that the fist is brought to the front of the shoulder, and then, as before, pushed back to the horizontal at the side. (Fig. 3.) This is executed on both sides by both parties.

No. 4. — Same position as the last, but the arm of positive is to be carried from the horizontal po-



Fig. 2.



Fig. 3.

sition at the side up to the perpendicular, over the shoulder, without bending the elbow, and back again to the horizontal at the side.

No. 5. — In this exercise positive holds the arm out horizontally in front, negative seizes as usual, and positive bends the forearm upon the arm, bringing the fist to the top of the shoulder, and back again to the horizontal in front, negative resisting. (Fig. 4.)



Fig. 4.

No. 6. — In this exercise, positive holds the arm out horizontal in front, negative seizes as usual, and positive carries the arm from this horizontal in front position to the perpendicular over the shoulder, without bending the elbow, and back again. (Fig. 5.)

No. 7. — The position in this exercise is shown

in Fig. 6, and is like that in Fig. 3, except that positive has a different position of the feet; and the



Fig. 5.



Fig. 6.

exercise is like that shown in Fig. 3, and described in No. 3, except that when the arm of positive is bent, the fist is brought to the top of the shoulder, instead of to the front of it.

No. 8. — This exercise begins with both the arms of positive thrust directly upward over the shoulder. The arms are carried down sideways to the horizontal position, and brought back to the perpendicular again, the negative resisting. (Fig. 7.)



Fig. 7.

No. 9. — The parties exercising take the position of the feet seen in Fig. 8. On the first beat they

join right hands. On the second beat, the one draws back his arm into the position seen in the cut, the other giving way for the purpose; the third and fourth beat is occupied by one in pulling the hand of the other into the position shown in Fig. 9. During the fifth and sixth beats, the position is changed back into that seen in Fig. 8. On the seventh beat, the parties both rise to a position in



Fig. 8.

which both of their legs are straight, and the hands hanging between them, the feet not having changed their places on the floor. On the eighth beat they let go hands, draw the forward foot back to the side of the other foot, and stand facing each other at the distance of two and a half or three feet. Now they begin with the other foot and hand.



Fig. 9.

No. 10. — With the same order as to music as in the last exercise, they join on the first beat one hand, on the second the other, midway between them, as in Fig. 10. On the third and fourth beat, one



Fig. 10.

of the parties spreads the arms to nearly a horizontal position at the sides (Fig. 11), the other resist-



Fig. 11.

ing. On the fifth and sixth beat, the arms are brought back again to the position seen in Fig. 10. On the seventh beat, the forward feet are withdrawn, and placed by the side of the back feet. On the eighth beat the hands let go. Then the exercise is repeated with the other foot forward.

No. 11. — Negative stands immediately behind positive, and puts his hands upon the back of positive's head. Half a strain is devoted to letting positive down, through the position seen in Fig. 12, into the position seen in Fig. 13 ; the other half-strain in raising positive into the upright posture again. Positive folds his arms, and keeps the body stiff and straight, not even allowing the neck to



Fig. 12.

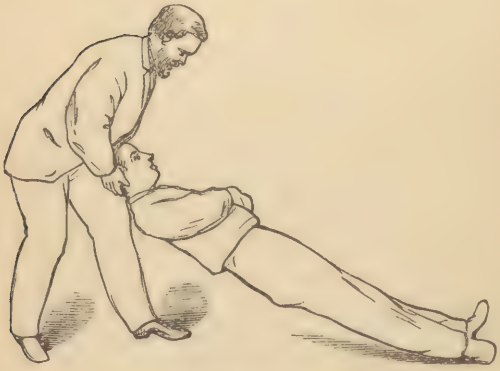


Fig. 13.

bend. For persons with weak necks this is a particularly valuable exercise.

I have intimated that these exercises have, in my own Institution, more frequently been executed with

three persons in a group. In Fig. 14 may be seen an illustration of the attitude in No. 1. The ingen-



Fig. 14.

ious teacher will have no difficulty in making the changes from one party to another very interesting, and very striking in military precision and effect.

It will be readily seen that the number of these exercises may be multiplied almost indefinitely. I have used more than half a hundred of them, and would certainly find no difficulty in multiplying the number to two hundred; therefore, the few I have given are not designed as an exhaustive presentation of this department in Gymnastics, but as suggestive.

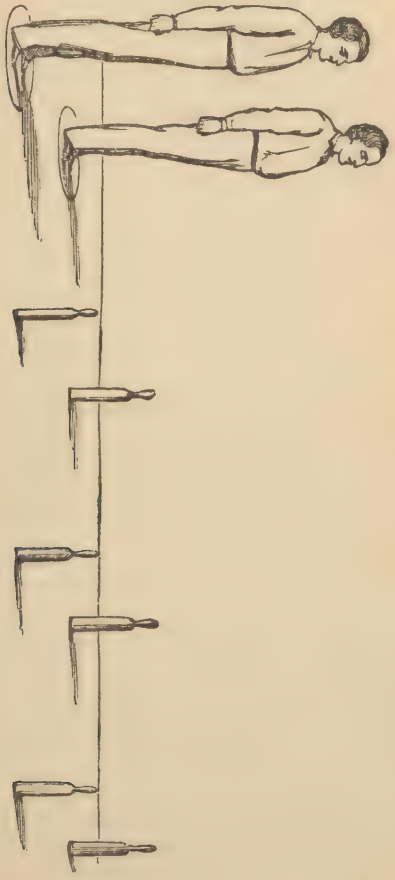
PIN RUNNING.

Some years ago I saw in a newspaper an account of a curious feat attempted by a farmer's boy. Some one offered him a dollar if, putting one hundred potatoes a certain number of feet apart he would bring them all one by one, and put them in the basket within an hour. The boy was confident he could win the dollar, but found upon trial that the time required to gather his potatoes would be many hours.

This feat suggested to my mind the game known as Pin Running, which has for several years constituted one exercise of the New Gymnasium. The game may be described in a few words, while the cut will serve to illustrate it.

The company is divided, by choosing sides, into two classes, and the first two, the captains, take their places, each in his own circle drawn with chalk or black paint on the floor. Two rows of pins, generally three in number, extend down the hall. The teacher gives the word, "One, two, three!" Upon the word "three," they run for the first pin, bring it back and set it up in the circle. Then the second, and finally the third. Whoever has the three pins standing in the circle first, wins one point in the game.

Tally may be kept by setting up the gymnastic clubs belonging to the hall in a conspicuous place,



where both classes may see at a glance the standing of the game.

This game is the occasion always of great cheering and excitement, but frequently produces very lame hips and legs, so great is the effort required to stop and turn round quickly, especially if the floor be slippery. It is well for beginners to exercise care in the practice of pin running. If the class is one of much experience, the game may be varied by increasing the number of pins, or by substituting for the last pin a small boy, or by making it a rule of the game that the pins shall not only be brought from their outstanding places and placed in the ring, but be immediately carried back again to their outstanding places.

MARCHES.

In the New Gymnastics we have a great many marches. I will describe a few of the figures, and, from the hints thus given, the teacher will have no difficulty in multiplying them almost indefinitely.

The pupils march in twos, arm in arm, around the outside of the hall, as in the ordinary promenade. Next they skip with the chassez movement. Now they leap, or run hand in hand, with short steps or long ones. Now they march down through the centre of the hall instead of around the outside of it; and, arriving at the end, they separate, and return to the other end of the hall in single column on either side. The lines through the centre and at the sides should be perfectly straight, the pupils at equal distances apart; the corners should be turned squarely, and all the movements marked by the same precision, energy, and dash that belong to the dumb-bells or rings. The individual bearing of each pupil is important. The arms when disengaged are on the hips, the elbows and shoulders well drawn back, head erect, and chin in against the neck.

Now, the partners joining hands at the head of the hall, the following figures may be executed: —

Leaping. — Short steps and long ones. The same backwards.

Leaping diagonally to the side, left and right alternately. This movement may be executed with short or long steps at pleasure.

The same may be repeated, hopping twice on either side. The same four times on either side.

Skipping. — Skip through the whole length of the hall with the chassez step.

Repeat this chassez step through the hall, but, joining hands with your partner, extend your arms to their utmost reach, those in front being held diagonally upward, those behind diagonally downward.

Repeat the last exercise, but after skipping four beats face to face with your partner, suddenly, (keeping hold of hands,) turn back to back, keeping right on with the chassez step, and again for four beats turn face to face, and again back to back, and so alternate through the whole length of the hall. This is a somewhat difficult movement, but will give much satisfaction when fairly accomplished.

Again skip the chassez step through the hall, but, instead of joining hands with your partner, skip face to face with him, clapping hands four beats, and then suddenly turn back to back, keeping right on in the same course, and skip four beats in silence. Then again face to face, clapping four beats, and

then back to back in silence, and so through the hall.

The last exercise may be varied by clapping while back to back, or clapping all the time, or remaining silent all the time.

Again, skip down through the hall, joining only the right hand with your partner. This may be pleasantly varied by one of the parties whirling as you go on, allowing his hand to turn in the hand of his partner.

Marching. — Now you may march in couples, joining one hand and marching upon the tips of your toes, and the next time through the hall upon your heels, and now upon one heel and one toe, and again upon the other heel and the other toe, and now with the toes turned square out so that the inside of the foot is pushed forward, and now with the toes turned inward so that the outside of the foot is pushed forward, and again, with one leg much shorter than the other, the short one being held stiffly bent, and now without bending the knees at all; and again with the knees constantly bent through the march, so that the person is a foot or more shorter than the usual height.

Now join hands with your partner and pull, marching through the hall, first one hand and then the other. In order to change the hands it is well to change sides at the ends of the hall, so that he

who marches down the right side of the hall this time will the next time march down the left side of the hall. It is hardly necessary to say that good order in the hall forbids that you should pull hard enough to draw your partner off the straight line.

Again, march through the hall, pushing your partner. In order to push to the best advantage, put the palm of your hand against the palm of your partner's hand, and, interlocking the fingers, raise the hands a foot or more above your heads, and lean heavily towards each other. The last two marches may be done in skipping, or even in moderate leaping, though this requires a good deal of practice.

Again, as the head or leading couple, who give the cue to all who come after them, join hands at the head of the hall, they suddenly stop, face each other, and join the ends of their fingers, with the arms held high between them, so that they make an arch. The second couple immediately skip under this arch and place themselves by the sides of the first couple, and put their arms up in the same position. The third couple do the same, and so on through all the couples. As soon as all the couples are thus placed, the head couple immediately join hands and chassez down under the entire arch. The second couple do the same thing, and so on till all the couples have skipped through and return to the

head of the hall, marching in single file on the outside.

Arriving at the head of the hall, instead of joining hands with your partners, remain eight feet apart, and march down through the hall thus separated. When the two lines are in position, join hands, and step quickly forward towards each other four beats, then step back again four beats. But the head couple, instead of retreating with the lines, join hands and skip rapidly down through the retreating lines, making their escape from the lines before the approaching lines catch them. On the second approach the second couple join hands, and repeat what the first couple have just accomplished. If the line be a long one, to prevent long waiting it is well to have two couples or three couples join hands and skip down at each approach of the two lines.

On going from the head to the foot of the hall, instead of separating from your partner, and returning to the head of the hall in single file, the first couple may pass off on one side, and the next couple pass off on the other side, and thus you return to the head of the hall in couples, instead of single file. On arriving at the head of the hall you join hands, and march down through the hall four abreast. And while thus abreast you can execute almost every figure which has been described above.

A pleasing variation may be introduced in this wise: when hopping sideways, for example, the couples may let go hands, and the couple on one side leap to the right, while the other couple leaps to the left, and so on.

The following series of figures are adapted to four abreast: —

On arriving at the head of the hall and presenting yourselves four abreast, the two inside persons join hands, face to face, with the arms extended, being thrust as far in front as they can reach diagonally upward, and behind diagonally downward. The outside persons join hands with no one, but they first turn their backs to their partners, and hold their arms parallel to the arms of their partners, skipping in this position four beats, when the original couples or partners join hands, face to face, keeping the arms in the same position. They skip four beats thus, and then the arrangement at the beginning is resumed, and so they alternate through the whole length of the hall.

A pleasing variation in the last figure is the following: Instead of the two inside persons joining hands, let the partners join hands with each other, and skip down the hall with their arms extended, as in the last figure, but let one couple have the arms in front held diagonally upward, the arms behind diagonally downward, and the other couple

hold the arms in front diagonally downward, and the arms behind diagonally upward. At the end of four beats let the arms be reversed. The effect is very queer and pleasing.

Now suppose that the two lines of couples have returned up the outside of the hall, and come together four abreast to go down the centre of the hall. Let the two inside persons suddenly turn face to face, raise the hands high and make an arch, the two outside persons join hands and chassez under the arch four short steps, and immediately raise their hands to make an arch, the first couple skipping under their arms, and so continue; the second and third quartette doing the same thing, and so through the whole class. This produces a very pleasing effect.

As the two lines of couples return on the outside of the hall, instead of joining hands in the centre four abreast to march down the hall, let one line of couples make an arch with their arms, and the other line of couples chassez or skip under that arch, and then they in turn make an arch, and the other line of couples skip under their arms, and so continue at pleasure.

Again, march down the hall in two lines of couples, the lines being eight feet apart. When all the pupils are in these two parallel lines, suddenly stop, and face towards the centre. Of course there

will be a double row of persons on either side. Now let the two heads of the inside lines join hands, and leap down through the centre, followed by each succeeding couple. When they reach the end of the hall, let them separate and return just outside the lines left standing. Let the inside lines repeat the figure and return to the outside of the first line. Now the heads of the four lines may join hands, and leap down through the centre and return the same way. And thus the ingenious teacher may diversify and vary this at pleasure.

March down the hall precisely as in the last movement. Let the two inside lines join hands, making a circle. Outside lines the same. Now let the inside lines skip in the circle to the left four beats, and the outside lines at the same time skip to the right four beats. Instantly stopping with a smart stamp, let them reverse, bringing themselves into the same position that they were in before they began to skip in the circle. Now let the arms of the outside circle fall over the heads of the inside circle, forming what in dancing is called a basket. Now four steps to the centre of the circle and four retreat. Again four steps to the centre and four retreat. Now the foot and head of the lines drawing back a little and making straight lines, the circle exercise to close by repeating the last figure.

Only a part of the marches and skippings are

given above. Some of the most interesting have not been given, because of the difficulty in describing them.

As in our series of gymnastic exercises for the upper part of the body, so in these the interest and beauty of the exercises depend upon sharp contrasts. The movements most differing from each other should be brought into close proximity. The order in which they have been given therefore is not the best one. The enterprising teacher will very soon learn the best modes of combination.

DRESS IN THE INTERVALS BETWEEN THE EXERCISES.

After you have been in the Gymnasium sufficiently long to work earnestly, you will find, at the end of ten minutes' vigorous play of the muscles, that you are in a profuse perspiration. To sit down, without additional clothing, and wait for the leader's call to the next series, is to secure a cold and sore muscles. Every person should take into the Gymnasium a shawl, a cloak, or an overcoat, — a shawl or blanket is perhaps best. As soon as you are done with one series of movements, while resting and chatting, you must wrap yourself in the warm shawl. We ought long since to have learned the

wisdom of this by observing the training of horses: at the close of an effort, no matter though it be in August, they always cover the animal with a warm blanket. If you would secure the best results, treat yourself in the same way.

LADIES' SHORT DRESSES.

THERE is one serious drawback upon the value of the gymnastic costume as it is generally managed. Ladies wear only one thin cotton stocking over the leg below the knee. Accustomed to wear long skirts, which protect this part of the leg from the atmosphere, they take off this protection, and then wear only one thickness of thin cotton. This is a great mistake, and ought to be corrected in every Gymnasium. With the many sorts of beautiful leggings now in the market, there is no excuse for such exposure. Those cloth leggings and gaiters that fit the whole leg accurately, and which are made for the person after a measure, and have rows of ornamented buttons, are very pretty, and perhaps, on the whole, are the best protection that can be adopted, though the knit legging with a strap under the shoe answers a very good purpose.

SHOES.

You have determined to secure a muscular, vigorous, symmetrical body. To this end, you have entered upon a course of gymnastics. In all your exercises in the Gymnasium, as well as in the hundred and one movements which you daily practise, you must use your feet. They must support the weight of the body, and must enter largely into every effort you make with reference to its training. If the feet play this pivotal part, they must not be distorted, they must have liberty.

The foot has not only a certain length but a certain width; both are indispensable to complete locomotion. The width of the average woman's foot is three inches and three quarters. The width of the man's foot is half or three quarters of an inch more. Now it happens that the average width of a woman's sole is two inches and a quarter instead of three inches and three quarters; so that the sole is an inch and a half narrower than the foot. The nude foot, placed upon the ordinary fashionable shoe sole with the upper removed, would press down over the sides of the sole to the floor. Cruel fashion, not less insanely than in China, has determined that women shall move and balance upon this narrow sole, — that the foot shall never by any chance spread out to its natural width. That half-crippled gait,

that unsteadiness of movement, that tenderness of the joints of the foot, those corns, that distortion of the toes, the large toe driven upon the others so that the joint at the base of the large toe is thrust out at an angle, in brief, that well-known, compressed, distorted, inflamed condition of the foot wellnigh universal among women, originates in those narrow soles. What I have said of woman's shoe is to almost an equal extent true of man's shoe.

The gait, the bearing, the whole movements, would be so changed by the adoption of a broad sole, giving complete support to every part of the foot, that, were it once introduced, nothing could ever drive it out.

When you visit the shoemaker, he will tell you, "O, I always make good broad soles."

But you must not forget that this is mere talk. He means nothing by it.

If you really want a wide sole, manage in this way. Ask the shoemaker to let you stand on a sheet of paper with your foot covered only by the stocking; and, resting your whole weight upon that foot, let him mark around it thus spread out. Take that paper home with you, first having assured the shoemaker, that, if the sole is one eighth of an inch narrower than that mark, you will not take the shoes. There will be no difficulty. He will make them right the first time. Now, with this broad sole, the

upper may be quite snug; and the foot will really seem smaller than it does when crowded out over the narrow sole of the present fashionable shoe.

For gymnastic exercises these broad soles are indispensable.

MODERATION IN EXERCISE.

Just as overworking the brain, producing headache and partial inflammation, is unwise, and always defeats itself, just so working too hard in the Gymnasium is a losing game. Begin with the performance of those moderate and gentle movements which are similar to many of the ordinary movements of life. Commencing with these, add gradually the more difficult and trying efforts. In two or three weeks, if you are careful to avoid taking cold after your exercises, you will be able to work pretty hard. In two or three months it will be very difficult to find any attitude, or to make any effort, that will produce the least soreness of muscle.

Most persons in beginning gymnastic exercises imagine that the good will be just in proportion to their efforts; and hence, through lameness and pain, many become discouraged, and abandon the work.

SORENESS AFTER EXERCISE.

If, during your first week in the Gymnasium, your muscles are sore, use arnica, which should be rubbed over the skin; and if a joint be particularly tender, it may be wrapped in a cloth saturated with arnica, and surrounded by a thick flannel wrapper, which should be allowed to remain during the night. This will very soon relieve any soreness which the exercise may produce.

BATHING.

All persons ambitious of the best results in physical training may use a daily bath in cold water. The best hour is generally on rising in the morning. Procure a bathing mat, or make one by sewing a rope into a piece of rubber cloth four or five feet in diameter. On springing out of bed, spread this mat on the floor close by your wash-bowl, which should contain three or four quarts of water. Standing in the centre of your mat with bathing mittens upon your hands (the bathing mittens are simply little bags made of an old towel), dip into the bowl, and apply the water rapidly to every part of the body. The bathing mittens will carry from the wash-bowl to your body considerable water. Apply to the chest, back and arms, and to every part of the body,

as rapidly as your hands can move. Now, first with a soft towel, and then with a rough one, wipe the body quickly, and with that vigor and earnestness which men display in wrestling or boxing. The feet should receive hard friction, and for a moment, standing with the bottoms of the feet upon a seam in the carpet, twist them from side to side while they sustain the weight of the body. Nothing will warm them so quickly, while the heat thus secured will continue for some time.

THE WARM BATH.

ONCE a week, on going to bed at night, bathe the body with warm water and soap, applying the soap freely. The morning cold bath will not cleanse the skin sufficiently. I may add, that it is a good practice to use more or less soap with every morning bath, especially if you have but little exercise, and therefore perspire but little.

FOOD.

I HAVE always found my own health promoted by eating but two meals a day.

It does not matter much about the hours; eight and two are good ones. At one time for a whole

year I ate breakfast at seven and dinner at half past twelve, and found the results satisfactory. If you should take your breakfast at seven and your dinner at four or five, you would flourish. What is needed is a certain amount of nourishing food, well digested.

I once knew a man who ate but once in twenty-four hours, and this meal was always taken on going to bed at night. He was a farmer, worked very hard, and was one of the toughest men I have ever known. I had in my service for some time, as a teacher of gymnastics, a gentleman who is now prominently identified with health-reform in New York City. He ate but one meal a day, and that always at noon. His endurance was remarkable.

It matters very little when the food is taken, if it be taken at the usual time or times. But I have no doubt that *two* meals a day are better than *three*. If, however, for any reason, you should continue to take *three* meals a day, the last meal should be a very light one.

I advise that you use for breakfast oatmeal porridge, cracked wheat, brown bread and butter, baked apples or pears, or stewed or dried fruit of any kind (prunes are especially healthy), and, if a hard laboring man, use a little steak or chop. Drink cold water, or, what is better, while eating drink nothing at all.

For dinner use a piece of beef or mutton as large

as your hand, with potatoes and other vegetables, and brown bread. If a workingman, you can take gravies or butter with your meat and vegetables. Take no dessert at all, except it be fruit. Generally speaking, when the moment for the dessert arrives, you have already taken as much food as you can well digest.

Don't eat too much. Excessive eating is not only common, it is almost universal. Of course, an undue portion of the nerve force is given to the stomach. If we give ourselves up to eating, the system soon learns the habit of receiving and disposing of a very large amount of food; but it does this at the expense of brain and muscle.

The quantity of food one really needs is much smaller than most people suppose. You will be surprised, if you make an experiment extending over six months, to find how little food suffices to keep brain and muscle in the highest working condition.

I believe that no vice among men subtracts so much from their physical and intellectual vitality as this excessive alimentation.

Are you fat, and would you like to reduce your weight? Take less food. Adopt none of these newfangled theories about *kinds* of food. The sorts generally found upon our tables constitute a good and natural variety, and you need not depart from it to reduce your flesh.

Suppose your horse were too fat, how would you reduce his weight? Of course, by giving him less food. Just as surely as such cutting off of the supplies in the case of your horse would lessen his weight, just so surely it will lessen yours. I know what you say about this,—that you eat less than others, and, no matter how little you eat, you still grow fatter and fatter. This is all a mistake. If you reduce your rations one quarter, and after a month reduce it one eighth or one fourth more, and so continue for six months, you will succeed in reducing yourself to any weight you may reasonably desire. I have tried this myself. I have advised scores of friends to try it. I never knew a patient effort to fail. In my own case I have observed the following: Ordinarily my weight is two hundred pounds; but I have from time to time seen good reason for reducing it to one hundred and eighty, and have always succeeded in effecting this reduction in about one month, without any inconvenience. During the first two or three days, there is a little hunger; but after that there is even less of it than when I am indulging in full feeding.

But here comes a lean man. He says it is easy enough to make fat folks lean, but what shall lean people do to become fat? This is not so easy, but nevertheless is generally quite manageable. These are the rules: Go to bed at nine o'clock, and rise in

the morning at six. On going to bed, drink one or two tumblers of cold water. Do the same on rising in the morning. Eat such food as I have advised above in pretty generous quantities. Lie down and sleep an hour in the middle of the day. Bathe frequently. Breathe a good atmosphere, especially while sleeping. Repeat all the funny stories you can hear, and laugh heartily over them yourself. Seek jolly society. Keep up a jolly frame of mind. Practise moderate exercise in the open air.

DRINKS.

If you would acquire the highest muscular conditions, avoid tea, coffee, and other warm drinks; use nothing but cold water, and this even in very moderate quantities while you are eating. Don't help the food into your stomach with any fluid other than the saliva. It will be recollected by those who have read the details of the training which boxers, pedestrians, boat-racers, and other similar persons practise, that warm drinks are always avoided. It is impossible to reach the best results, either physical or mental, while using tea and coffee.

The best way to secure the water necessary to carry on the functions of the internal economy is

to drink freely, on rising in the morning, say one or two tumblers, and the same on lying down at night.

CONDIMENTS.

To the gymnastic student I would say, you may take with your food salt, pepper, spice, ginger, cinnamon, nutmegs, cloves, mustard, oil, or other ordinary condiments, in *very moderate* quantity. All of these are more favorable to physical development than sugar. Use sugar and syrup, if at all, with great moderation. If you are determined to reach the best results, abandon them.

THE NEW GYMNASTICS

AS AN

INSTRUMENT IN EDUCATION.

A Lecture delivered before the British College of Preceptors, London, March 7, 1864, by Moses Coit Tyler, M. A.

Mr. Chairman, Ladies, and Gentlemen: —

The mind of Lord Bacon, brooding over and methodizing all knowledge within the reach of man, has indicated the boundaries and the relations of physical culture, in the following sentences which I extract from "The Advancement of Learning": "The good of a man's body is of four kinds, — health, beauty, strength, and pleasure." Hence the knowledge that "concerneth his body is medicine, or art of cure; art of decoration, which is called cosmetique; art of activity, which is called athletique; and art voluptuary, which Tacitus truly calls '*eruditus luxus*.'" And after several paragraphs in exposition of the first two branches of bodily knowledge, he continues: "For athletique, I take the subject of it largely, for any point of ability whereunto the body of man may be brought, whether it be of activity or of patience; whereof activity hath two

parts, strength and swiftness; and patience likewise hath two parts, hardness against want and extremities, and endurance of pain or torment. . . . . Of these things the practices are known, but the philosophy that concerneth them is not much inquired into."

I am quite sure that I do not need to consume the time of my auditors on this occasion with any labored arguments to convince them of the importance of physical culture. Certainly I may be allowed to take this for granted, — that all intelligent educators in this age are thoroughly persuaded that the body needs education as truly as does the mind; that this process of bodily education should commence and continue with that of the mind; and perhaps I may be indulged in the expression of the opinion, that if the general practice does not yet equal the general belief upon this subject, it is owing to certain inevitable obstructions presented by the current methods of carrying this belief into effect, rather than to any lack of sincerity in the belief. If those methods were more practicable, they would be more practised.

At the same time, it has seemed to me that there might be a real advantage gained if I were to make, as the basis of my address this evening, a very brief sketch of the historical and literary antecedents of this important department of education, thereby indicating both the opinions and the proceedings of

other ages and other nations upon the subject. I shall paint this sketch as a sort of consecrating background to my picture of "The New Gymnastics as an Instrument in Education."

In searching for the first developments of the art of gymnastics, we must be content to go to that small but sacred spot of earth whither we are obliged to look for the germs of all our science, art, and song. For, although traces of a crude athletic practice are to be found among the Hebrews and many of the early Asiatic tribes, it was in Greece that gymnastic cultivation first received that systematic attention which raised it to its true rank among the liberal arts.

The Greek education was divided into two branches, which comprehended their entire disciplinary method either in youth or maturity; and these two branches were, gymnastics for the body, and music (by which they meant the topics presided over by all the nine Muses, such as history, poetry, mathematics, painting, logic, rhetoric, &c.) for the mind. They placed the subject of gymnastics first, and they always kept it first. In their view the education of the body was in the front, both logically and chronologically. Any one familiar with the facts descriptive of Greek education related by Grote, or Thirlwall, or Mitford, will be quite prepared to accept the statement of the "Encyclopædia Britannica,"

which asserts that "the Greeks bestowed more time upon the gymnastic training of their youth than upon all the other departments put together." The following sentence from the profound and elaborate work of Mr. Grote describes the supreme devotion paid to gymnastics in Sparta, and reflects to a certain extent the prevailing practice of all the other Hellenic States: "From the early age of seven years, throughout his whole life as youth and man no less than as boy, the Spartan citizen lived habitually in public, always either himself under drill, gymnastic and military, or as a critic and spectator of others." And, in another part of his history, the same distinguished scholar assures us that "the sympathy and admiration felt in Greece towards a victorious athlete was not merely an intense sentiment in the Grecian mind, but was perhaps, of all others, the most wide-spread and Panhellenic." And Bishop Potter, in the first volume of his "Antiquities," confirms this by the declaration that "such as obtained victories in any of their games, especially the Olympic, were universally honored, almost adored." Without entering further into details, it may be sufficient to say, that we have abundant evidence to assure us that the art of gymnastics was held in the highest honor throughout Greece. It was recognized and sustained by the State. Solon introduced into his code a special series of laws for its

protection. The art was consecrated by every sentiment, religious, literary, and domestic. Certain of the gods were regarded as the peculiar patrons of the gymnasium. The teachers of morals discoursed of attention to physical exercise as a distinct virtue, calling it ἀρέτη γυμναστικὴ, the gymnastic virtue. The great historic sects in Grecian philosophy took their titles from the gymnasia, where they were first expounded. Moreover, he who should excel in gymnastics thereby won high personal distinction and the most honorable rewards of the State. Thus in the mind and life of a Grecian in the ancient time, gymnastics intwined themselves with all his ideas of individual culture and personal dignity, piety, beauty, health, prowess, literary power, philosophy, and political renown.

We have not the same temptation to linger over the story of Roman gymnastics. With regard to the position of bodily culture in the Roman plan of education, there is the testimony of Eschenberg, who affirms that corporal exercises were viewed by them, especially in the earlier times, as a more essential object in education than the study of literature and science. This is a sentence which glances both ways. It may mean that their devotion to gymnastics was very great; it may hint that their appreciation of literature and science, at the period referred to, was very small. However, it seems evident that,

prior to the time of the emperors, the gymnastics in vogue were of a rude character, having chief reference to the discipline of military recruits, and to the exigencies of certain athletic games like the Consualia. Scientific gymnastics came in with the importation of other Greek ideas by the conquerors. The first gymnasium at Rome is said to have been built by Nero. Still the Greek gymnastics never became thoroughly naturalized and assimilated among the Roman people. The art seemed a fair but unprosperous exotic; and, after serving a temporary purpose in the hands of scholars and gentlemen, it subsided into the brutality of pugilism and gladiatorship, and finally expired in the general wreck of the Imperial State.

The lost art rose again, after its slumber of centuries, with the dawn of Chivalry, but in an altered garb and tone. The mediæval gymnastics very naturally took their methods from the chivalric spirit. Fencing, wrestling, vaulting, boxing, the sword exercise, horsemanship, and the dance, now held the place in men's regard once occupied by the old Greek Pentathlon; and these forms of gymnastics revived the ancient credit of physical culture, and were accorded the universal devotion of princes, and noblemen, and poets, and artists. Tasso, Da Vinci, and Albert Dürer were among the renowned gymnasts of the period.

From the decline of Chivalry, onward through the sixteenth, seventeenth, and eighteenth centuries, the practice of gymnastics fell more and more into disuse; many forms of exercise became quite obsolete, — only the limited methods of sparring and fencing seemed to remain in the memory of educators. The allusions to gymnastics, scattered through our English literature of the period, abundantly prove to how slight and contracted a scheme the once elaborate Art of Gymnastics had become reduced.

But although the practical details of gymnastics may have relaxed their hold upon human attention, the theoretical standing of physical culture, in any comprehensive plan of education, was on all hands, by all respectable writers in the principal languages of Europe, most abundantly and emphatically asserted. The renowned scholar, J. F. Scaliger, published at Lyons, in 1561, a work entitled "The Art of Gymnastics." Four years later, Leonard Fuchs put forth at Tübingen a treatise on "Movement and Repose"; and, in ten years from that date, Ambrose Pare issued at Paris a work with the same title. In the same year, at Cologne, Jules Alessandrini published a work in twenty-three books, called "The Art of Preserving Health." And, tracing the literature of the subject onward through the succeeding one hundred and fifty years, we find similar productions by Borelli, Brisseau, Paulline, Stahl, Hoffmann, and

Burette. It is pleasant to find a distinct and very earnest statement of the claims of physical education in a continental writer who lived before Shakspeare, and whom we happen to know Shakspeare read and loved. For in a very brilliant essay by Montaigne on the education of youth, occurs this passage: "I would have a boy's outward behavior and the disposition of his limbs formed at the same time with his mind. It is not a soul, it is not a body, that we are training up; it is a man, and we ought not to divide him into two parts."

Turning from the continental languages to our own, we are proud and grateful to discover that English literature, so rich in philosophy and poetry, and in the gems of perfect speech, is by no means behind other literatures in the department of Physical Education.

Let it never be forgotten by us that the first book ever written in our English tongue on education was on *Physical Education;* and so long ago as 1540, in the reign of Henry VIII., and by no less a man than Sir Nicolas Bacon, who is said to have trained Elizabeth to empire. I have already shown that his illustrious son, Lord Bacon, did not neglect this alcove of human thought and knowledge; and no one at all acquainted with his pages can have failed to observe how thoughtfully and reverently he considered the body's welfare, speaking of "the human

organization as so delicate and so varied, like a musical instrument of complicated and exquisite workmanship, and easily losing its harmony."

The next important work in English literature upon this subject is Milton's Tract on Education. In this most eloquent essay the great bard defines education as "that which fits a man justly, skilfully, and magnanimously to perform all the offices, both private and public, of peace and war"; and after recommending a plan "likest to those ancient and famous schools of Pythagoras, Plato, Isocrates, and Aristotle, and such others, out of which were bred such a number of renowned philosophers, orators, historians, poets, and princes, all over Greece, Italy, and Asia," he claims that his own method should exceed them, and "supply a defect as great as that which Plato noted in the commonwealth of Sparta; whereas that city trained up their youth most for war, and these in their Academies and Lyceums all for the gown, this institution of breeding shall be equally good both for peace and war. Therefore, about an hour and half ere they eat at noon should be allowed them for exercise, and due rest afterwards. . . . . The exercise which I commend first is the exact use of their weapon, to guard and to strike safely with the edge or point; this will keep them healthy, nimble, strong, and well in breath; is also the likeliest means to make them grow large and

tall, and to inspire them with a gallant and fearless courage, which, being tempered with seasonable lectures and precepts to them of true fortitude and patience, will turn into a native and heroic valor, and make them hate the cowardice of doing wrong. They must be also practised in all the locks and gripes of wrestling, wherein Englishmen were wont to excel, as need may often be in fight to tug, to grapple, and to close. And this will perhaps be enough wherein to prove and heat their strength."

Advancing to the next prominent English writer upon education, we come to the calm and judicious works of John Locke; and no one will be surprised to hear that Locke's scheme of education recognized the value of full attention to the development of the bodily health and vigor.

"A sound mind in a sound body," remarks this great philosopher in his treatise entitled "Some Thoughts concerning Education," "is a short description of a happy state in this world. He that has these two has little more to wish for; and he that wants either of them will be but little the better for anything else. Men's happiness or misery is most part of their own making. He whose mind directs not wisely will never take the right way; and he whose body is crazy and feeble will never be able to advance in it."

The foregoing authorities from our earlier English

literature are enough to indicate what I desired to represent, — namely, that the department of Physical Education has an honorable and unquestionable basis in the recognition of the most illustrious writers of the English language; and it will be sufficient for me to add, that every important writer on education, from John Locke to Horace Mann and Herbert Spencer, has reiterated, in a great variety of forms, and with the use of erudition and logical appeal, these earlier claims on behalf of Physical Education.

I think no one can have accompanied me to the present point in my address without having forced upon his mind this thought, — the extraordinary contrast between theory and practice, with reference to physical culture in our modern systems of education, especially in England and America. I have just made reference to our greatest and most influential writers on education, all enforcing the claims of physical culture; and yet, when we look at the facts as they stand before our eyes on every hand, we must acknowledge that these claims are strangely disregarded. It may seem a very bold statement, but it has been made by wise and cautious tongues, that our modern education practically ignores the body, practically forgets that boys and girls, who are its subjects, are endowed with corporeal natures, for the healthful, vigorous, and symmetrical development of which it is strictly responsible

I do not doubt the existence of many beautiful and cheering exceptions to this rule. I know, also, that these exceptions are happily increasing. But up to latest dates, the vast majority of educational institutions, both in Great Britain and America, have failed to recognize the true position of physical culture in the work of education. Take London alone. Bringing schools of every grade into the account, the general rule is, that bodily culture is either wholly unprovided for, or, at best, is left to the option of each pupil; and even when, in exceptional cases, bodily exercise is made imperative, the amount required bears no proportion to the efforts made for intellectual exercise. Now, I must strenuously affirm, that this is not recognizing the true position of physical culture. And I venture to lay down the proposition, that physical culture will not receive its true recognition until every school is founded on the creed, that the body is as essentially the subject of its educational care as the mind, requiring for its development scientific preparation and earnest conscientious practice; that physical exercise should not be left as an optional thing, but should be made an integral part of every day's hearty work; moreover, that this branch of education should in every instance be conducted by wise, well-educated, and competent masters, and should be no more committed to the undirected efforts, to the whims and hap-hazard ex-

periments of the pupils, than should geometry or grammar; and consequently and finally, that it is as absurd to establish a school, omitting to make provision for adequate gymnastic education, as it would be to invite pupils to a school in which no arrangements were made for desks, forms, chairs, books, pens, maps, or paper. In short, the word "education" should be understood to embrace in its operation our entire nature, mental and physical; both departments advancing together hand in hand, mutually respectful, helpful, and tolerant. Bodily culture should be received as an equal and an honored occupant in the great Temple of Education, not kept standing upon the doorsteps like a shivering beggar, nor thrust down into the scullery, as if it were some servant of dirty work.

But, having spoken of the vast and startling discrepancy between theory and practice in our modern education with reference to physical culture, I hasten to express the opinion that this is a phenomenon, for which the conductors of schools cannot generally be censured. I am convinced that it has been chiefly owing to the low tone of public appreciation upon this subject, whereby schoolmasters have lacked the encouragement and support of parents in any efforts to bring this department up to its proper level; and second, to certain radical faults in the common methods of bodily culture, which have

rendered their general adoption either inconvenient, undesirable, or impossible. I claim the right to bear this testimony. It is an honest one, — not given with any purpose of empty compliment. It is my constant duty and privilege to be thrown into conversation with teachers; and I can truly say, that I generally find them anxious to realize a higher standard of practice in the department than they have yet attained, but trammelled and thwarted by these practical difficulties to which I have made allusion.

Perhaps the fundamental remedy for this is direct and energetic action upon the general mind of the nation, to inform it more thoroughly of the reasons for bodily education, and to imbue it with more earnest convictions as to the duty of parents in sustaining schoolmasters in their efforts to attend properly to the subject. We must create a public sentiment for educational gymnastics. From pulpit and platform and lecture-desk and printed column, there must stream a current of knowledge and influence for physical regeneration, which shall place the cause upon its proper basis in the intelligence and moral sense of the Anglo-Saxon race.

But, as I have already intimated, even when other difficulties are removed, obstacles frequently occur, arising from the methods of gymnastic practice commonly used. The old system of heavy gymnastics,

with its fixed beams, bars, ladders, swings, and wooden horses, requires a considerable outlay for its construction; but, more than all, requires a large room for its occupation. Ours is a civilization of large cities; space is precious; and any system which is to meet the wants of the time must be so very simple in its machinery as to be capable of introduction wherever there is standing room. The civilization of precious space will not be apt to give up room for bulky systems, no matter how good. The gymnastics must be adapted to the civilization: the civilization will not adapt itself to the gymnastics. When, therefore, from want of room or other cause, teachers have been obliged to forego this heavy system, and have resorted to the method technically called "drilling," as administered by a "drill-sergeant," they have frequently been aware of a difficulty of the very opposite character, viz. that the method was too light, and apparently superficial, besides soon becoming monotonous and uninteresting, — so obviously inadequate as a means of physical culture, that they not seldom begrudged the time which they gave to it.

Accordingly, in very many cases, masters, dissatisfied with both experiments, have been obliged to content themselves by encouraging the usual games of the playground, if they are so fortunate as to have a playground; although conscious that these sports

are by no means a realization of physical education, and especially that they do not counteract the worst tendencies of the school-room, viz. the tendencies to stooping shoulders and narrow chests.

It is at just this angle of thought that I desire to bring to your notice a new system of gymnastics, which has been devised by an eminent medical man, and a practical educator of our time, for the very purpose of filling up this lamentable chasm in our modern educational practice, — a system which has now undergone the test of several years' rigorous experiment, and has come forth from the trial with success.

This system is at the present time attracting attention in England under the name of "Musical Gymnastics." It was constructed by Dio Lewis, M. D., of Boston, Mass., a physician and medical writer of great renown in his native land.

I shall now endeavor to describe to you this very original and novel system; and to point out several particulars in which it seems to me beautifully adapted to meet our modern wants.

I shall first attempt a verbal description; but, as words can but poorly portray movements so unique as those which constitute this system, I have brought with me several of my juvenile pupils, who will present to you, after my lecture, some characteristic specimens of the method. Let it be said, then, in

brief, that the new gymnastics differ from all preceding systems as regards the apparatus employed, the mode of the employment, and the results attending employment. The system discards, at once and totally, the heavy, complicated machinery of the old gymnasium, and adopts instead light wooden rings, wooden rods, wooden dumb-bells, and wooden clubs. None of these implements are attached to post, or wall, or ceiling; but each is merely held in the hand when used, and laid aside when the exercises connected with it are performed. Furthermore, the exercises which this simple apparatus involves are elaborated, with a view to their physiological value, in distinct sets; each exercise has its own invariable place in the series to which it belongs; all are adapted to quick and stirring music; they combine almost infinite variety with consummate simplicity and precision; and, finally, they admit of being performed in drawing-room, school-room, or hall, wherever there is space sufficient for outspread arms, in a manner the most graceful, pleasing, and appropriate.

With your permission, I shall now go over these statements, and develop them somewhat more in detail.

And, first, concerning the machinery of the new system. There have been two difficulties in constructing a system of gymnastics which should be

capable of universal diffusion. On the one hand, if the method was thorough, the apparatus was too elaborate, too costly, and absorbed too much space; on the other hand, if the apparatus was simple, the exercises failed in thoroughness, variety, and prolonged interest. It seems to me that Dr. Lewis's system happily and ingeniously reconciles both extremes of difficulty. It will not be laborious to prove to you that the apparatus is simple. One of my boys has brought here to-night, in his hands, four gymnasiums. The apparatus is so slight and inexpensive that the humblest primary school can afford to get them, and can find room to use them. And with these simple and uncostly implements are connected a vast multitude of the most varied, powerful, and graceful movements, bringing into play, under healthful conditions, every muscle, joint, and member of the human body. Perhaps the greatest encomium to be pronounced on Dr. Lewis is, that he has struck a vein which every teacher can go on working without end: he has indicated a path which leads to perpetual additions of exercise conceived in his spirit, but presenting constant variety to the pupil. So much for the apparatus.

Second, concerning the mode of its employment. Under this head there are several particulars to which I wish to direct your attention. And the first has reference to a gymnastic principle, interpreted by

a law in mechanics. Momentum is made up of two factors, weight and velocity. Allowing momentum to remain the permanent quantity, the greater the weight, the less the velocity; and, conversely, the greater the velocity, the less must be the weight. Passing over to the realm of gymnastics, that term which corresponds to momentum is the amount of exertion each one is capable of putting forth with safety; and it is plain, that, if you have heavy weights, you must have slow movements; and, on the contrary, if you would have rapid movements, you must have light weights. It costs as much effort to pass a light body through the air swiftly, as it does to pass a heavy one slowly. Now, the more common idea in our modern gymnastics has been to give prominence to weight. How many pounds can you put up? what vast herculean burden can you carry? have been the test questions, and have indicated the direction of the average gymnastic ambition. But the new system inverts this order, and seeks to give prominence to the idea of velocity in gymnastics rather than of weight. It claims that a better muscular result is obtained by this method. It claims that, while huge lifting power is quite desirable for those who design following the profession of a porter, or a hod-carrier, or a coal-heaver, it is not so important, for ladies and gentlemen in the more usual avocations of life, as flexibility, grace, ease, fineness

rather than massiveness, poise, perfect accuracy and rapidity of muscular action, and a general diffusion of muscular vigor. Dr. Lewis is fond of illustrating the differentia in the systems — on the one hand of weight, on the other hand of velocity — by pointing to the van-horse, with his vast though stiff muscles, with his slow, ponderous, elephantine movements, just fit to draw burdens for the world; and then to the carriage-horse, with his graceful, airy, elastic step, his rapid movement, his vivacity, his fineness of nerve and muscle.

What I have just said will serve to indicate the mechanical principle of the new gymnastics. I must now direct your attention to its fundamental physiological principle. It adopts the plan of lively, moderate exercises, in opposition to the plan of laborious, violent, exhausting movements. I believe the idea is becoming very generally accepted by physiologists, that the muscular system may be cultivated at the expense of the vital, — that a man may develop a magnificent shell of muscle, and draw away to the surface the life and power of the interior, — that a man may become very weak by becoming very strong. I need only remind you of the recent discussion upon this subject in "The Lancet," suggested by the defeat of Heenan.* I think a wrong direction

* "Those who know what severe training means will, perhaps, agree with us, that Heenan was probably in better condition five

has been given to the ambition of boys. A vulgar desire has been created to rival draught-horses, and porters, and the muscular monstrosities of the circus. The idea has been cherished, that one must do *much*, — must make vast, straining, depleting exer-

weeks before meeting his antagonist than on the morning of his defeat; although, when he stripped for fighting, the lookers-on agreed that he seemed to promise himself an easy victory, while exulting in his fine proportions and splendid muscular development. It is now clearly proved that Heenan went into the contest with much more muscular than vital power. Long before he had met with any severe punishment, indeed, as he states, at the close of the third round, he felt faint, breathed with difficulty, and, as he described it, his respiration was 'roaring.' He declares that he received more severe treatment at the hands of Sayers than he did from King; yet, at the termination of the former fight, which lasted upwards of two hours, he was so fresh as to leap over two or three hurdles, and distance many of his friends in the race. It was noticed on the present occasion that he looked much older than at his last appearance in the ring.

"Without offering any opinion as to the merits of the combatants, it is certain that Heenan was in a state of very deteriorated health when he faced his opponent; and it is fair to conclude that deterioration was due in a great measure to the severity of the training which he had undergone. As with the mind, so with the body, undue and prolonged exertion must end in depression of power. In the process of the physical education of the young, in the training of our recruits, or in the sports of the athlete, the case of Heenan suggested a striking commentary of great interest in a physiological point of view. While exercise, properly so called, tends to development and health, excessive exertion produces debility and decay. In these times of over-excitement and over-competition in the race of life, the case we now put on record may be studied with advantage."

tions. Has not this tendency been carried too far? Especially injurious is this process to the young. Many a fine fellow at Cambridge and Oxford trains for the boat-race, and wins heart-disease. Many a fine fellow carries off the oarsman's laurels, and expends in that attempt the vitality which might help him to get any other kind. But, hastening from this point, I add, that the new system discards the *acrobatic* principle. It makes no provision for ground and lofty tumbling. It does not invite its disciples to practise locomotion by rolling over and over; it does not ask them to stand on their heads, or walk on their hands, or practise any form of personal inversion or revolution in the air. Those who are fond of acrobatic gymnastics will of course pursue them. I believe many people who need artificial exercise have been deterred from gymnastics by their repugnance to this sort of performance. I need not remind you, also, that any gymnastic method which makes much of acrobatics, so far forth excludes the whole female sex from the advantages of gymnastics. There is but one other point of which I desire to speak while attempting to describe the *modus* of the new gymnastics; and that point has reference to the introduction of music, for the purpose of stimulating and regulating bodily movements. When I consider the value of music, as recognized in dancing and in military life, I wonder that the importance of making

it an essential and an inseparable element in gymnastics has not sooner attracted the deliberate attention of educators. In Dr. Lewis's system, music is made so central a member, that without it we can do nothing. When the music leaves off, we adjourn.

Having spoken of the *machinery* and the *method* of the new gymnastics, I must say a few words as to the *results*. One of the most precious and honorable of these results is, that the new system is essentially fitted for both sexes; or, to bring out more pointedly the idea which I aim to convey, while it provides an elaborate scheme of exercise for man, there is not, within all its ritual, one exercise which cannot be performed with equal safety, propriety, and success, by woman. I do not need to insist upon the immense desirableness of such a result. Surely, if either sex is to be excluded from gymnastics, let it be ours. Boys and young men have at least something, in the athletic sports of the playground and the field, to atone for the loss of scientific bodily culture. If they lose gymnastics, the loss is not without a species of remedy. But if ladies are denied gymnastics, there seems to be absolutely no indemnification. Herbert Spencer tells us, that near his own residence is a school for boys, and one for young ladies. In the uproar, the vociferation, the gleeful shouts of the playground, he was instantly informed of the existence of the former; but many months

had elapsed, after taking that residence, before he was made aware that an establishment for young ladies was in full operation in the very next house, enjoying, too, a large garden overlooked by his own windows.* Among the physiological results of the new system, I can truly say, also, that a very marked feature is the symmetry of the muscular development produced. For every muscle of the body, Dr. Lewis has devised movements. No class of muscles receives attention to the neglect of the rest. The result is a beautiful, harmonious, complete cultivation of the entire body. Moreover, a large series of movements are constructed with the view of counterbalancing the tendencies of our modern life, and especially of our modern school-life, to a depression and narrowing of the chest, and to the formation of an uncomely roundness upon the shoulders. One of my pupils, a student in a well-known college of London, informed me last evening, that, although he has been under my care but one quarter, his tailor was startled to find the size of his chest enlarged by two or three inches. The great peril of our Anglo-Saxon race is from pulmonary weakness. Our gymnastics should direct their remedial enginery to that quarter.

* "Look at the number, still too great, of schools, — I beg pardon, — of academies, where young ladies are educated within an inch of their lives, perfected into paleness, and accomplished into spinal distortion and pulmonary phthisis." — W. B. Hodgson, Esq., LL. D.

I can only hint at the peculiar benefit resulting from the habit of performing all these bodily movements in strict musical time. Whatever muscular development ensues becomes far more closely associated with the intelligence and will. The whole frame at last seems imbued with the musical principle, vitalized and permeated by some breath of harmony, grace, and accurate ease. Although I have by no means brought forward all the important results which in experience have attracted my notice, I dare not trespass upon your patience longer than to mention this other one; namely, the attractiveness of the new gymnastics to those who practise it. The new system insists upon being enjoyed, if pursued at all. It seeks to stir the sources of exhilaration, mirth, enthusiasm. It seeks to achieve this by the vivacious character of the movements, by the contagion of perfectly concerted action, and by the delightful stimulus of music. Of course much depends, also, upon the magnetic power, the cheerfulness and playfulness, of the teacher. I can honestly testify, that, when these conditions are complied with, the new gymnastics rise far above the dreary level of task-work and monotonous drudgery, and are literally and permanently a pleasure. They recognize the artistic necessity of touching the play-impulse. They attempt to inaugurate, during the hour devoted to gymnastics, a sort of physical jubilee, a carnival of the emotional and vital powers.

And again, in an English magazine, Mr. Tyler says: —

It will be unnecessary to go further in this analysis of Dr. Lewis's gymnastic methods. I will conclude what I have to say upon this part of the subject, by gathering up the scattered threads of my description, and compressing into a single paragraph a statement of the essential characteristics of the new system. Let it be understood then, in brief, that these gymnastics differ from all preceding systems as regards the apparatus employed, the mode of employment, and the results attending its employment. The system discards at once and totally the heavy, complicated machinery of the old gymnasium, and adopts alone light wooden rings, wooden rods, wooden dumb-bells, and wooden clubs. The exercises which this simple apparatus involves are elaborated in the most philosophical manner, in distinct sets; each exercise has its own invariable place in the series to which it belongs; all are adapted to quick and stirring music; they combine almost infinite variety with consummate simplicity and precision. They exclude neither young nor old; they can be performed by the most delicate at the same time that they employ the strength of the most athletic; they are an exhaustless source of entertainment and diversion; they comprehend movements for every limb and muscle of the body, thereby producing fine symmetry of development; and finally, they admit of be-

ing performed in drawing-room or hall, by ladies and gentlemen together, in a manner the most graceful, pleasing, and appropriate.

It will not be imagined that the system we have endeavored to portray was elaborated in a solitary and instantaneous effort of thought. On the contrary, it was a slow growth in its author's mind. In the midst of his toils as a public lecturer, he prosecuted his gymnastic studies, and conducted his gymnastic experiments. A multitude of exercises were conceived, and thrown away, before those which now form the system were adopted. Every conception was put to the test, and survived or perished, according to its demonstrable merits in the crucible of practice. When at last the system had reached a good degree of perfection, Dr. Lewis decided to bring to an end his nomadic way of life, and to locate permanently in the city of Boston, the political capital of Massachusetts, the intellectual capital of the Western Hemisphere. It was his purpose to found there a great institution for physical education, which should be the means of proving and of propagating his methods of bodily culture. Accordingly, in 1859, he went to Boston. He immediately opened a spacious hall for the reception of classes; he took charge of gymnastics in several prominent schools; he established a monthly gymnastic paper; he appeared before the American Institute of Instruction,

at its annual Convention, in the following year, and explained his system to that important educational society; he occasionally accepted invitations to lecture in neighboring cities; and, by all these means, he drew to himself and to his theme the earnest attention of the public. It could not be otherwise than that a demand for teachers of the new system should soon be made upon him. Educators in the remotest parts of the nation, in Mobile, in Galveston, in San Francisco, had heard of his methods; and from far and near came assurances that living exponents of the New Gymnastics were wanted by the people. He now felt justified in carrying into execution a scheme which he had long cherished. Obtaining an act of incorporation from the Legislature, he founded, in the year 1861, the Normal College for Physical Education. Concerning the establishment of this college, the same words may be used which Neander employs concerning a book written by Marsilius, of Padua, *it made an epoch*. Graduates of this institution have gone forth through all the cities and villages of the North, preaching everywhere the doctrines of their earnest Teacher, organizing classes among men, women, and children, in every rank of life, and demonstrating to the world the dawn of a new Profession, — the Profession of Health and Bodily Vigor. The movement of thought in America towards physical culture is thus

organized upon a profound and abiding basis. An impulse has been given which vibrates through a population of twenty millions; and this impulse cannot die. From Bangor to Sacramento, from Montreal and Quebec to the lands which are robed in the fiery skirts of war, a popular awakening upon this subject has been created, so deep, so universal, as to give it an historical significance, and to make the foundation of the Normal College for Physical Education an event from which to date a new period in the evolution of Anglo-American life. And of this vast and beneficial movement Dr. Lewis stands clearly at the head. To him the people are looking as to an Apostle and Guide. He has inaugurated in America a great national reform, as distinct, as influential, as glorious, as that which was wrought in Germany by Salzmann and Jahn, or in Sweden by the poet and gymnasiarch Ling.

At the close of Mr. Tyler's address before the College of Preceptors, several prominent gentlemen who had listened to the address bore earnest testimony to their interest in the subject of physical education.

The Rev. A. Conder said, that he fully concurred with the lecturer in the opinion that violent gymnastics, like violent muscular exertion of every kind, are most injurious. As a Cambridge man, he had had

many opportunities of observing this; and it was well known that those who in early manhood were distinguished for their skill in athletic sports, too frequently paid the penalty for their disregard of the laws of health, by premature loss of vigor. He was acquainted with a large public school in Ireland, in which violent games were at one time very much in vogue; but it was observed that diseases of the heart became prevalent among the boys; and the result was, that the authorities had to prohibit the objectionable sports. Mr. Conder thought, therefore, that the system explained by Mr. Tyler deserved the serious consideration of all teachers, as it appeared to afford ample scope for the due exercise of the muscles, without the risk of producing any of the evils to which other plans often gave rise.

W. B. Hodgson, Esq., LL.D., F.C.P., said, that he had never listened to a lecture with which he was more pleased than he had been with Mr. Tyler's. He had not been impressed so much with the novelty of the views maintained in it, as with the clearness with which their soundness had been demonstrated, and with the constant reference to physiological principles. It was of great importance to remember that gymnastics deserved to be carefully studied, not merely, or even chiefly, for the sake of the body, but above all in order that the mind may acquire full development and strength. Some people might decry

this doctrine as savoring of materialism; but it is now universally admitted that it is necessary to attend to the health of the brain as a condition of intellectual soundness and vigor; and it scarcely required to be proved that this admission virtually included the larger proposition, that the health of the whole body affects the condition of the mind. Every one must have had opportunities of convincing himself that this is the fact, and of the truth of Rousseau's assertion, — "The stronger the body, the more it obeys: the weaker the body, the more it commands." Dr. Hodgson expressed his concurrence in the principle laid down by Mr. Tyler, that the object of gymnastics should be to develop not mere strength, but rather rapidity and flexibility of movement, of which the exercises that they had seen performed were admirable examples. The reason for the preference had been clearly stated by the lecturer, and it depended on the distinction between muscular force and vital force. These forces were by no means identical, or even convertible; and the latter might, and too often was, sacrificed to the other: a serious mistake, which amounted in fact to the sacrifice of the end to the means, — of life to the instruments of life. For this folly there was now less excuse than at any former period, since the circumstances of civilized life rarely, if ever, required the exertion of great physical strength. The speaker said that he

had always been a great pedestrian ; and experience had satisfied him that the power of endurance exerted in walking twenty or thirty miles a day, depended much more on general good health, and especially on sound digestion, than on muscular development. With respect to the exercises which Mr. Tyler's pupils had gone through, every one must have been struck with their great diversity, their elegance, and their perfect adaptation to the requirements of females as well as of boys. He trusted that the lecturer's system would be extensively adopted in this country, where there was a great need for well-devised and regulated physical education.

F. J. Weightman, Esq., of Hollywood School, Brompton, said, that as he had the honor and satisfaction of being the first schoolmaster in this country who had made use of Mr. Tyler's services for the instruction of his pupils, and had thus had good opportunities for observing the results of his system, he wished to make a few remarks on the subject. And first he would observe, that, admirable as were the exercises which they had seen that evening, they must not be considered as anything more than fragmentary specimens of a complete and carefully progressive system, of which, consequently, they were altogether incapable of conveying an adequate idea. As the exercises required close attention and prompt action, they had considerable value as a means of

mental training, and as aiding in the formation of habits of self-control and command. The memory especially was brought into a state of great activity, so that boys were able, with little or no external suggestion, to go through the whole or a long series of complex movements in their proper order. Another point was, that the pupils took very great pleasure and interest in the musical gymnastics, which they regarded not as a part of their school work, — in which light drilling was too often viewed by boys, — but as a real amusement and relaxation, from which therefore they derived the greatest possible benefit. The last observation he had to make was that Mr. Tyler's system was an excellent introduction to music, by developing and cultivating the perception of musical time. The speaker said he had often been much amused by the awkward attempts of beginners to keep time in their movements. At first many of them appeared to be quite uninfluenced by the music, but tried to do what was required by watching and imitating the movements of the other pupils. This necessarily prevented simultaneousness of motion, and led to highly laughable consequences. After a few lessons, however, even those who were the worst in this respect showed manifest signs of improvement; a new sense seemed to be awakened in them; and at length their perception of musical time became fully developed, and they were then

able to perform the whole of the exercises, guided by the music alone. He considered that this, though a merely collateral advantage of the system, was one of considerable value.

From The Albion, Liverpool, December 21, 1863.

"Among the many inventions and devices by which, of late years, new interest has been given to the pursuit of physical health by means of exercise, none is more beautiful or useful than Dr. Lewis's system of Musical Gymnastics, lately introduced in an improved form, and with marked success, by Mr. Hulley, at the Rotunda Gymnasium.

"The system is peculiarly adapted for ladies, because, while fully exerting, it does not overtask the strength of the participants, and it has a great charm for all who use it in the variety and liveliness of the exercises of which it consists. The appliances used are equally simple and ingenious. Amongst them are rings, balls, bags for throwing, sceptres, and other simple implements. By the varied use of these, a most complete education of the whole muscular system is secured; and by the adaptation of music to the exercises, a grace and fascination is thrown over them, which every one can appreciate, but which will be especially valued by those who are practically versed in the comparative merits of the different methods of gymnastic education. For its

effects on the frame, the new system has such warm testimonies from principal members of the faculty as establish it to be fully as beneficial in its results as it is attractive in operation.

"We hope to hear of the extension of the system to many schools and institutions. The portability of the apparatus prevents the existence of any obstacle to its general introduction, and its popularity where tried is universal. It is most gratifying to find that, especially in higher circles, the importance of gymnastics to both sexes is now generally recognized. It is not too sanguine to expect from this reform an absolute renovation of the race in process of time; and the great encouragement given to Mr. Tyler in London, is one remarkable symptom of its spread. All who aid in it may pride themselves that they have done something to banish from generations yet unborn many of the misshapen forms and languid constitutions which are a sad testimony to the physical declension that ensues when morbid habits of inaction are generally indulged."

From The Weekly Record, London, July 15th, 1853.

"Musical Gymnastics. — A large and fashionable audience assembled in the Vestry-hall, Chelsea, last Monday evening, to listen to an address by Mr. Moses C. Tyler, M.A., and to witness the exercises of a class of Mr. Tyler's pupils in the

new system of musical gymnastics. These gymnastics are entirely novel in their apparatus and methods; can be performed with equal success and benefit by ladies, gentlemen, and children; are executed to the accompaniment of music; and are not only very beautiful and conducive to health, but are also very attractive to those who engage in them.

"The chair was taken by George Wallis, Esq., of the Kensington School of Art, who presented Mr. Tyler to the audience in a very felicitous speech. Mr. Tyler's address was devoted to the importance of scientific physical culture, and to an explanation of the peculiar features of the new system of which he is the introducer in London. At its conclusion the platform was cleared, and a fine class of boys from Hollywood School, Brompton, took their places on the stage, and presented a succession of exercises which they had been taught. Their execution of these movements was in concert, and with musical accompaniment, and produced the greatest delight and enthusiasm in the spectators, who expressed their approbation by rounds of hearty applause. The exercises were, indeed, very exciting and picturesque, and must have a fine effect on the health and forms of all who practise them. They realized the description applied to them by the *New York Times*: — 'They are poetry in motion, and motion set to music.'

"After these exercises had been given, brief speeches were made by Mr. Weightman, Master of Hollywood School, bearing testimony to the success of these gymnastics among his pupils; by B. Waterhouse Hawkins, Esq., the distinguished anatomist, whose eloquent approbation of the new system, from the stand-point of scientific observation, electrified the audience; by Dr. Woolmer, of Warwick Square, who expressed his views as to the importance of bodily culture, and his indorsement of the method which had been presented; by Mrs. Bessie Inglis, the accomplished lecturer, whose address was admirable in thought and diction; and finally by Mr. William Tweedie, who gave an account of his interest in physical education, and of his acquaintance with the gymnastic system which had been presented that evening, and who concluded by moving a vote of thanks to Mr. Tyler for his address, and to the members of Hollywood School for their brilliant part in the doings of the meeting.

"A vote of thanks to the Chairman, Mr. Wallis, was also heartily carried.

"The audience separated at a late hour, apparently highly delighted. Among the distinguished persons present we observed the intellectual face of Elihu Burritt, 'the learned blacksmith,' who seemed intensely interested, but whose delicate condition of health prevented his taking any active part in the

meeting. As a whole, the meeting was a rare and striking success."

From the Marylebone Mercury, January, 1864.

"METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH. — The usual monthly meeting of the above association was held at the Scottish Corporation Hall, Crane Court, Fleet Street, on Saturday, the 16th inst., Dr. Thomson, F.R.S., president, in the chair.

"*Physical Training.* — Mr. Moses C. Tyler, M.A., who was present for the purpose of exhibiting by means of some of his pupils his system of physical training for schools, said that his mode of training claimed to be a compact and simple method of physical culture. He could only give a few samples, and those of the simplest nature, although whole schools could go through a similar course, and the usual accompaniment was a piano. A half-dozen youths were then introduced, and to the chiming of a bell and the beating of a drum passed through a number of very graceful exercises with dumb-bells, rings, and wands. Mr. Tyler at the conclusion said that the object of his system was, by exercise, to develop the whole of the muscles of the body, and that it was adapted equally for the strongest men or the most delicate ladies; and he would take the liberty of mentioning one result that his system had

accomplished. He had been told by masters of schools where it was introduced, that that which before had been looked on as a mere mechanical effort was now viewed as a pleasing recreation. Another of the advantages would, he believed, be that it would do away with the tendency to round shoulders, which prevailed among both girls and boys, by the bending over the desks to their lessons. Mr. Liddle said he thought he might express the thanks of the association to Mr. Tyler. So far as he (Mr. Liddle) had seen of the system, it appeared to recommend itself for general adoption. There was nothing violent in it, or likely to strain the muscles; and it would give health and physical development to both boys and girls. He would move that a vote of thanks be given. Dr. Druitt seconded. The Chairman said that he thought the system highly deserving of encouragement. Dr. Lankester had no doubt that it would be beneficial. The vote was carried unanimously."

From the City Press, March, 1864.

"London Mechanics' Institution. — On Wednesday, M. C. Tyler, Esq., M.A., gave a lecture on the 'Art of Gymnastics,' which was received with the approbation that it well deserved. Mr. Tyler pointed out the anomaly that, of those ancient nations whose intellectual works remain as models in literature, the

Greeks, Romans, &c., actually devoted more time and space to the due training of the body than to mental culture, whilst most modern nations, until a very recent period, had neglected the muscular arts, or had caused them to become matters of reproachful tendency. The energy and effective address of the lecturer placed the cause in a favorable point of view, and having successfully pleaded the necessity for muscular exercise and recreation, he showed how, by musical accompaniment, the graceful motions imparting muscular power could be made most acceptable to childhood and to classes. Mr. Tyler received and deserved the thanks of the audience for his manly and patriotic influence in favor of judicious exercises and games."

From the Standard, February 8th, 1864.

"ROYAL POLYTECHNIC INSTITUTION. — The third fashionable morning entertainment was given on Saturday, February 6th. Among the novelties presented was a lecture on 'The Art of Gymnastics,' by Moses Coit Tyler, Esq., M.A., illustrated by twelve of his pupils. This is a very interesting exhibition, abounding in graceful evolutions by the pupils. Mr. Tyler's system repudiates the course of gymnastics which prevailed some years ago, by which many boys were seriously injured. By his plan, the exercises are so regulated that females may

adopt the system without any fear of injury from violent contortions of the body. Mr. Tyler's accompanying address on the importance of gymnastic training as promoting physical health was very striking."

The *Morning Advertiser* (Feb. 2) describes the exercises as "exceedingly graceful, manly, and beautiful"; the *Morning Star* (Feb. 2) as "at once attractive and useful as a means of physical development"; the *Daily News* (Feb. 2) as "something wonderful."

From the Whetstone Circular, March 12, 1864.

"Working Men's Institute. — Mr. Tyler's lecture on 'Gymnastics, Ancient and Modern,' on Thursday evening last, was deservedly well attended. We went to get an idea worth carrying out, and we got it. The development of the intellectual to the neglect, and to a certain extent at the expense, of the physical energies of youth, has hitherto been sadly the rule in all our systems of education; but in Musical Gymnastics we find a remedy which cannot be gainsaid. How shall we enumerate the advantages of the system? The expense of its accessories is trifling, and the space for carrying it out can be found in any school-room of moderate dimensions. Moreover, parents cannot object to the system, seeing that their boys and girls can all engage in it, for its movements do not require turning over on heads and

heels, or vaulting on each other's shoulders. Active motion without severe bodily exertion; muscular, as an aid to vital action; endless change of position; and the calling into play every joint and muscle of the limbs by turn, are its principal features."

From the Bethnal Green Times, March 26th, 1864.

"PEEL GROVE INSTITUTE. — Mr. Moses Coit Tyler, M.A., the celebrated Professor of Gymnastics, gave a highly interesting lecture at the above institute on Monday evening, March 21st.

"The lecturer gave an historical sketch of the gymnastic art, and quoted the opinions of eminent men concerning it, and concluded by exhibiting his new system, which is evidently far in advance of any other, with a class of boys who have been under his training. The audience was no more spell-bound by the graceful evolutions of these lads, all of which were performed to music, than they were by the lecturer's eloquence and forcible rhetoric. Their fixed eye, their riveted attention, and oft-repeated bursts of applause, were sufficient to show their appreciation of the speaker's delineation.

"Mr. Tyler's genius is well directed towards awakening an interest in the neglected subject of physical culture. In his hands it is sure to revive. We wish the gifted lecturer and his good work abundant success."

THE GYMNASTIC CLUB AT REGENT'S PARK COLLEGE. — The following expression, as the latest one received from the different institutions with which I am connected, I append for the value it may have to those who are interested in the practical working of the new gymnastics as an educational process: —

"REGENT'S PARK COLLEGE,
April 19th, 1864.

"DEAR SIR, — I have been requested by the Members of the Gymnastic Club at Regent's Park College, to express to you their satisfaction and pleasure in receiving the course of exercises, through which you have led them, this last quarter. They would specially notice the interesting character given to the practice by the introduction of music.

"They already feel the benefit of these exercises, and are persuaded that, if persevered in, they cannot fail to accomplish their object in training all the muscles to a prompt and vigorous action, and so in promoting a sound physical culture.

"With warm assurances of regard, and with grateful acknowledgments of your kind attention,

"I remain,

"Yours very truly,

"JAMES SULLY,

"*Hon. Sec.*

"MOSES COIT TYLER, Esq."

Mr. Tyler has returned to America, and accepted the professorship of English Literature in the Michigan University.

I trust his new occupations will not lessen his interest in physical education. I regard it as a great honor to have been Mr. Tyler's instructor in the Gymnastic Art. Of all the advocates of the new system he is the most eloquent. I have indulged the hope that circumstances might lead to the complete devotion of his life to the propagation of the new system of physical culture.

THE END.

DESCRIPTIVE CATALOGUE

OF THE

WORKS OF DIO LEWIS,

PUBLISHED EXCLUSIVELY

BY

CLARKE BROTHERS,

Nos. 68 and 69 Bible House, New York.

1883.

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"The first wealth is health."—*Ralph Waldo Emerson.*

"A short life is not given us, but we ourselves make it so."—*Seneca.*

"We are weak, because it never enters into our thoughts that we might be strong."—*Salzmann.*

"I am convinced that he who devotes two hours each day to vigorous exercises will eventually gain those two hours, and a couple more into the bargain."—*Washington Irving.*

"The right combination of bodily exercises and mental discipline makes the soul circumspect and manly."—*Plato.*

"By no other way can men approach nearer to the gods than by conferring health on men."—*Cicero.*

DIO LEWIS.

"LIFE ILLUSTRATED," in its June issue of 1874, published an extended biographical sketch of Dio Lewis, from which a few sentences are selected.

"Dio Lewis is an original character. His large rotund body and well-formed head make him at once a striking and conspicuous figure. He stands nearly six feet high, and weighs 200 pounds. His complexion is fair, eyes blue, hair, formerly auburn, now white. His skin is fresh, with a peachy hue. His brain is very large, measuring twenty-four inches in circumference, and is both long and high. Though the intellectual organs are large, the moral sentiments are still larger. He overflows with good feeling, affection, and charity, is very active, a hard worker; in brief, a live, original, energetic, enthusiastic, scholarly man."

We add a passage from the address of Prof. MOSES COIT TYLER before the "BRITISH COLLEGE OF PRECEPTORS," London, England, on "*Dio Lewis's Place among Educators*:"

"The movement of thought in America towards physical culture is thus organized upon a profound and abiding basis. An impulse has been given which vibrates through a population of twenty millions; this impulse cannot die. . . . And of this vast and beneficial movement, Dio Lewis stands clearly at the head. To him the people are looking as to an apostle and guide. He has inaugurated in America a great national reform, as distinct, as influential, as glorious, as that which was wrought in Germany by Salzmann and Jahn, or in Sweden by the poet and gymnasiarch Ling."

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"Sincere thanks for Dr. Lewis' little book. . . . If the habits of our children were formed upon his counsels, health and longevity would largely take the place of physical weakness and premature death. . . . Have observed these rules of health and can testify to their benign efficacy. I am just entering on my seventy-eighth year with a sense of vigor rare with me forty years ago. . . . Whoever begins to read his little book will not be apt to stop short of the end. Please let me know the price singly and by the dozen."—*Pres. Thompson, Theological Institute* (Hartford, Conn.)

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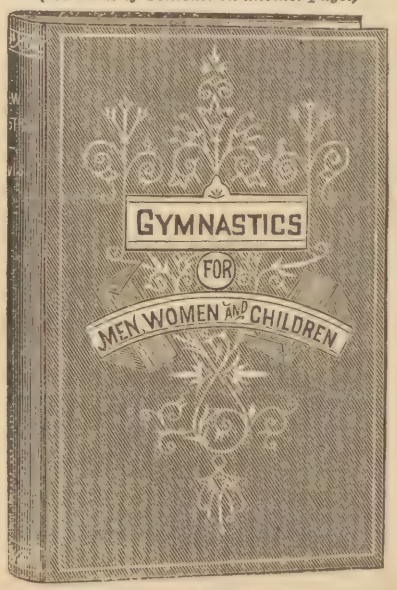
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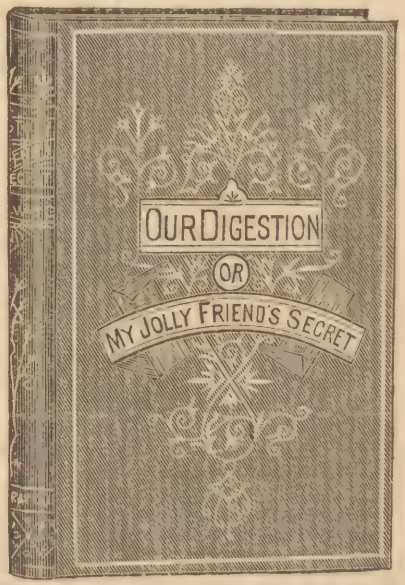
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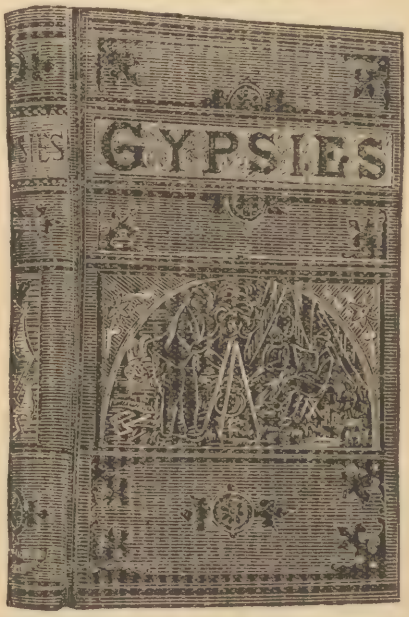
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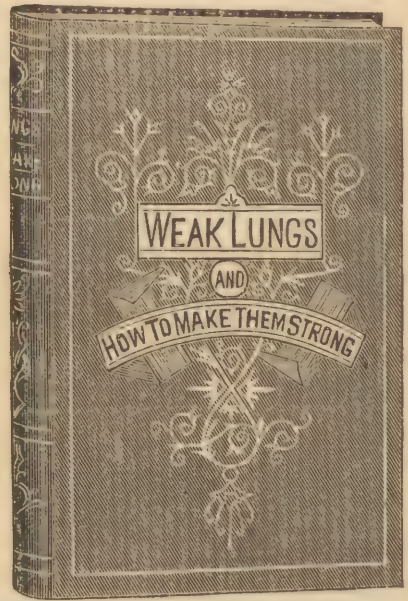
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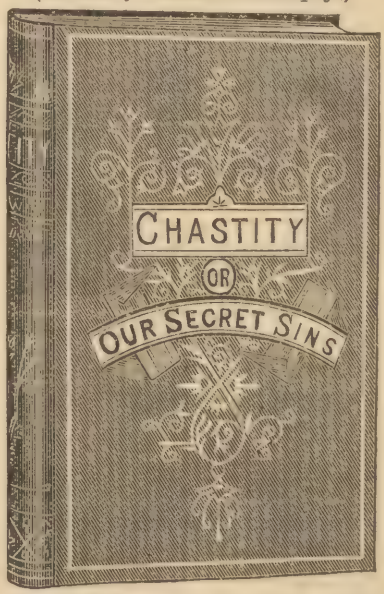
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